Internet Shopping -
A Taxonomy of Consumer Online Actions

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ABSTRACT

This thesis applied the theory of activity and goal-directed action to the study of online shopping actions. It first studied qualitatively the structures of online shopping actions using the self-confrontation interview method. The qualitative findings established the structural, cognitive and dispositional dimensions of online shopping actions including knowledge and value structures, attention processes and flow. The typical behavioural traits of online shoppers were also identified. Findings also emerged about the tensions between consumers' online and offline actions and the consequences of the technological mediation of shopping.

From these qualitative findings, a survey instrument was developed to query online shoppers on various dimensions of their online shopping actions. Cluster analysis of the survey results produced a taxonomy of consumer online actions from which a typology of online shoppers was generated. The qualitative findings on the typical behavioural traits of online shoppers were then used as criteria for the qualitative usability analysis of retail websites. Retail websites of four product and service categories were analysed for their usability, i.e. ability to accommodate the typical behavioural traits of online shoppers such as propensity to experience information overload and to multi-task, potential for experiencing affect and flow etc.

This thesis made several theoretical, methodological and practical contributions. It extended goal-directed action theory beyond its traditional scope of work actions and group activity to the realm of consumer behaviour. It also introduced a different theoretical framework to consumer psychology by applying the theory of activity and goal directed action to consumer behaviour. It made a methodological contribution by applying the self-confrontation interview method to the study of online behaviour. This thesis' findings also have practical implications for the understanding of online behaviour, the diffusion of e-commerce and the design of Internet interfaces.

Keywords: Theory of activity and goal-directed action; taxonomy of online shopping actions; typology of online shoppers; online behaviour; technological mediation; self-confrontation interview; cluster analysis; website usability analysis

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INTRODUCTION

Business-to-consumer e-commerce via the Internet has provided consumers in the developed world with a viable shopping alternative. Consumers accustomed to brick-and-mortar shops on the high street can now opt to purchase a wide variety of merchandise through the Internet, where shopping is mediated by information technology. Consumers are thus transplanted into a shopping environment that is familiar in function, yet alien in form. Consumers can make use of the Internet to engage in the whole gamut of shopping activities including obtaining product information, product selection, price comparison, product trial, order placement and payment. Yet, when shopping over the Internet, such activities are not conducted in environments which are traditionally associated with shopping, e.g. at the home or workplace computer. Furthermore, the computer mediates the shopping experience by offering product information through digitised images and text, enabling the consumer to examine merchandise "virtually" and to pay for merchandise without a physical exchange of money. Conventional shopping and technologically mediated shopping therefore differ in key experiential, qualitative aspects.

What makes online shopping a subject that is worthy of a social psychological investigation? First, shopping has been and remains a key activity of modern society. Second, in this increasingly wired world, the time we spend on the Internet constitutes an ever-growing part of our daily lives. The study of online shopping marries these two important issues and gives us an understanding of how everyday activities can be affected when they are mediated by information technology. It gives us a glimpse of how people straddle two different milieus – the physical offline world and the virtual Internet environment – and whether their attitudes and actions are influenced by that traversal. More importantly, it enables us to test whether existing theories of social psychology can be fruitfully applied to a new context, and to test the heuristic value of these theories in situations where spatial and temporal constraints are minimised.

THEORETICAL FRAMEWORK AND OBJECTIVES

This thesis applies the theory of activity and goal-directed action to study in depth the qualitative, social-psychological dimensions of consumers' online shopping behaviour. It also draws on relevant findings from the fields of consumer psychology, diffusion of innovations, human-computer interaction, as well as ethnographic studies on the adoption of information and communication technologies. Based on this qualitative understanding of online shopping actions, a survey instrument on typical online shopping actions was designed, from which a taxonomy of consumer online actions emerged and a typology of online shoppers was generated. With this heightened understanding of consumer online actions, a qualitative analysis of selected retail websites will then be undertaken to assess how well these websites accord or do not accord with the social psychological dimensions of typical online shopping behaviour.

The specific research questions to be addressed are:

- What are the typical behavioural sequences which online shoppers perform?
- Which forms of knowledge are implicated in the execution of different online shopping actions?
- What are the values, attitudes and motivations guiding the actions of online shoppers?
- Which situational variables if any, affect online shopping behaviour?
- How and in what ways does online shopping differ from conventional shopping?
- What does the nature of online shopping actions reveal about online actions in general?
- Does prevailing retail website design take into account the human factors which influence online store interaction? If so, how?

This thesis seeks to make the following theoretical contributions:

- The extension of goal-directed action research - beyond the traditional areas of work activity and social interaction - into the realm of consumer behaviour;

- A proposal of how social psychology theories on action, e.g. the theory of activity and goal-directed action should be reformulated to suit human-computer interaction and technologically mediated activity;
- The application of the theory of activity and goal-directed action to the study of online shopping behaviour, thereby introducing a new dimension to consumer behaviour research; and enhancing consumer psychology by proving a social-psychological understanding of technologically mediated activity;
- A user-centred rather than system-focused perspective of human-computer interaction which takes into account the consumer's motivational and attitudinal characteristics;
- The design of a social-psychological, theory-based measurement instrument for typologising online shoppers;
- A social-psychologically grounded qualitative analysis of retail websites.

EMPIRICAL RESEARCH

This thesis utilised between-method and within-method triangulation (Webb, Donald et al. 1966; Creswell 1994; Creswell 1998; Flick 1998) of qualitative and quantitative methods. Specifically, this thesis employed "mixed model studies...that combine qualitative and quantitative approaches within different phases of the research process" (Tashakkori and Teddlie 1998, p. 19). Empirical work for this thesis comprised three major components:

- **Qualitative analysis of online shopping actions** involving self-confrontation interviews with online shoppers and systematic observation of their online shopping actions. From these qualitative findings, the key structural, cognitive and dispositional dimensions of online shopping actions were identified;
- **Quantitative analysis of online shopping actions** through a pilot survey. The survey queried consumers on various dimensions of their typical online shopping actions. The survey results produced a taxonomy of consumer online actions from which a typology of online shoppers was generated.
- **Qualitative usability analysis of retail websites** of four product and service categories was conducted. These websites were analysed using value-added usability criteria, i.e. in terms of their ability to accommodate the typical behavioural traits of online shoppers.

This thesis focuses on consumers in the US. The US was selected as the setting for this study because its e-commerce market is undeniably the most developed worldwide – its value in terms of projected sales is expected to reach US65.9 billion dollars in 2001, surpassing all other countries (Weisman 2001). Specifically, empirical research for this thesis was conducted in Connecticut, USA. According to a report by the Pew Internet and American Life Project (Horrigan 2000), there are few differences in Internet use across the regions of the US. However, with regard to online shopping, some salient regional differences exist (Horrigan 2000). People in the Northeastern region of the US (of which Connecticut constitutes a part) are more active purchasers and price comparers than those in the rest of the country. The percentage of Northeasterners who shopped online for gifts in 2000 was 9 percentage points above the national average of 45 per cent.

CHAPTER OUTLINE

Part I - Introduction Chapter 1 states the research goals and explains why the theory of activity and goal-directed action was adopted as the conceptual framework for studying online shopping actions. It also provides the reader with an understanding of the central tenets of this theory, and how it can be applied to the study of online shopping. It continues with a description of the processes involved in online shopping. This is followed by an illustration of the phenomenology of online shopping, with special attention being paid to the component actions of online shopping acts.

Part II – Qualitative Analysis of Online Shopping Actions Chapters 2 to 5 focus on the qualitative analysis of online shopping actions. Chapter 2 provides a broad introduction to the US e-commerce industry, followed by a review of Internet and online shopping adoption in the US. It then describes the methodology adopted for the qualitative analysis of online shopping actions and justifies the use of these methods in light of the theoretical framework. Chapter 3 proposes a range of theoretical online shopper types and illustrates these types by presenting the online shopping action structures of selected interviewees. Chapter 4 then provides a broad analysis of the online shopping action structures of all of the interviewees studied. It also relates these findings to the theoretical framework adopted. Chapter 5 analyses the effects of the technological

mediation of shopping, focusing on specific aspects such as online shopping as a leisure activity, social gains from online shopping, trust, mental accounting and the diffusion of online shopping.

Part III – Quantitative Analysis of Online Shopping Actions Chapters 6 and 7 centre on the quantitative analysis of online shopping actions. Chapter 6 explains the structural, cognitive and dispositional dimensions explored in a survey on online shopping actions. The questionnaire design, administration and sampling procedure are also explicated. Chapters 7 discusses the taxonomy of consumer online actions emerging from the results of pilot trial of the survey. The development of a typology of online shoppers from the taxonomy of online shopping actions will also be explained.

Part IV – Qualitative Usability Analysis of Retail Websites In Chapter 8, a qualitative usability analysis of retail websites will be undertaken to assess whether they are able to accommodate the typical behavioural traits of online shoppers as discussed in Parts II and III. Selected websites of specific online store genres will be analysed for their ability to induce flow, avert script conflict, stimulate emotive reactions, accommodate multi-tasking and goal deferment and so on.

Part V – Conclusions and Directions for Future Research Chapter 9 concludes by providing a summary of the key findings and discusses their significance in light of the development of the theory of activity and goal-directed action, consumer psychology and human-computer interaction. It also discusses the theoretical and methodological contributions made by this thesis. Finally, it assesses the limitations of this thesis and suggests possible directions for future research.

TERMS AND DEFINITIONS

E-commerce can be defined as "any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact" (European Commission 1999). Kalakota and Whinston (1996) identify three distinct types of electronic-commerce – business-to-consumer, business-to-business and intraorganisation. Business-to-consumer e-commerce can be conducted through the use of any of the following electronic media either entirely or partially during the transaction

- broadcast, cable and satellite television, videotext, teletext, mobile phones and the Internet (Gould and Silberzahn 1996; Baer 1998). As this thesis focuses only on business-to-consumer e-commerce transacted via the Internet, any further references to **e-commerce** will refer specifically to Internet-based business-to-consumer e-commerce. Any activity that takes place via the Internet will be considered **online** activity.

The term shopping has been used in a variety of ways. Some researchers regard only pre-purchase browsing activity as "shopping" (Bloch, Ridgway et al. 1989; Salomon and Koppelman 1992). However, most studies include in "shopping" the act of purchasing, pre-purchase browsing and information-seeking. (Tauber 1972; Bellenger and Korgaonkar 1980; Babin, Darden et al. 1994). This thesis will adopt the latter approach and consider browsing, information-seeking and/or purchasing as **shopping**. Engaging in any of these activities over the Internet will be considered **online shopping**. Consumers who shop online will therefore be referred to as **online shoppers**. Shopping in conventional brick-and-mortar stores will in turn be referred to as **conventional shopping**.

PART I – THEORETICAL FRAMEWORK

1 BACKGROUND AND THEORETICAL FRAMEWORK

This chapter begins with description of the typical processes involved in an online shopping transaction which terminates in a purchase. This serves as a background for understanding the contexts in which online shopping actions take place. It continues with a brief survey of social psychological action theories and explains why the theory of activity and goal-directed action was adopted as the conceptual framework for studying online shopping actions. It also discusses the central tenets of this theory and explains how it can be applied to the study of online shopping. It then assesses the limitations of existing consumer psychology for the in-depth study of online shopping actions.

1.1 KEY STAGES OF ONLINE SHOPPING TRANSACTIONS

This section describes the typical processes involved in online shopping transactions for readers who are unfamiliar with the subject. Other readers may wish to proceed directly to the next section. A complete online shopping transaction can be dis-aggregated into seven activities performed in three main phases (Kalakota and Whinston 1996, pp. 274 – 275):

Prepurchase determination
- Product/service search and discovery in the information space
- Comparison-shopping and product selection
- Negotiation of terms, e.g. price, delivery charges, delivery times

Purchase consummation
- Placement of order
- Authorisation of payment
- Receipt of product

Postpurchase interaction
- Customer service and support

This stepwise description of an online shopping transaction lends a framework for understanding the processes involved in online shopping, specifically the contexts in which the consumer has to weigh different options and make decisions. For each of these phases of online shopping, the consumer faces risks and disadvantages, yet enjoys some benefits. It is imperative to have a general understanding of these risks, disadvantages and benefits because they affect the consumer's online shopping actions.

1.1.1 Pre-purchase determination

In the first phase of an online shopping transaction, the consumer has to surf various retail websites to obtain more information about the product which he/she is interested in. Product information can be in the form of text, graphics, photographs and even digitised audio-visual material. He/She then makes his/her product selection based on price and product specifications, delivery times, handling charges and other ancillary charges such as taxes. Should the consumer require further information on a product, most retail websites provide contact details for consumers to submit queries either through email, telephone, facsimile or postal mail messages.

In this first phase, the consumer is unable to personally examine a product as he/she can in a brick-and-mortar store. Instead, the consumer has to accept that the product information provided on the Internet vendor's website is accurate and reliable enough for him/her to make a reasoned judgement of the quality of the product or service. However, the consumer may have to contend with the fact that product information provided by different websites may not be equally comprehensive. Some websites may have photographs of products which can be enlarged and scrutinised, while others may merely list product specifications. Some websites may also fail to include information on delivery charges and times. There is also the added disadvantage of waiting for product information to be downloaded while incurring telephone and/or Internet service charges.

In addition, while the conventional shopper can make product enquiries in a regular store and obtain instant advice, online shoppers may not enjoy the same level of customer service. Internet vendors are not equally efficient in handling customer inquiries conveyed through email, telephone, facsimile or mail (Shklyanoy 1999). According to a market survey, more than half of all consumers expect retailers to respond to email inquiries within six hours, but only 29 per cent of online retailers do so (Jupiter Research 2000). Such inconsistencies will undermine the online shopper's ability to comparison-shop and to select the best offer.

Furthermore, the consumer may not be familiar with all of the Internet vendors which are offering the products or services. Some Internet vendors may be established and reputable companies which already own regular brick-and-mortar shops, e.g. Sears and JC Penney. Other Internet vendors may retail only on the Internet, yet have

acquired a sound reputation, e.g. amazon.com. However, due to the low overheads of doing business over the Internet, many Internet vendors are small and medium sized companies which are not well-known beyond their local areas (Esrock 1999). In such cases, it is difficult for the consumer to assess the reliability of an Internet vendor and the quality of its products using only the information provided by the website.

However, the consumer can derive benefits during the first phase of the online shopping transaction. Due to the global nature of the World Wide Web, the consumer has the added benefit of having access to a wider range of products and vendors than was previously possible (Moor and Lunt 1999). With this "expansion of competition" (Hoffman, Novak et al. 1995), consumers can purchase products from vendors who are located in countries where product prices are more attractive. At the same time, the online shopper does not have to physically travel from store to store to compare product prices, thereby incurring costs of time and transportation (Whinston, Stahl et al. 1997). Instead, he/she can efficiently process a wide range of product information in a fraction of the time. This is aided by comparison-shopping services available on the World Wide Web, which relieve the online shopper from having to log on to different websites to compare prices. Interactive elements such as search engines give consumers the ability to locate relevant information efficiently. Furthermore, consumers need no longer confine their shopping to the opening hours of brick-and-mortar shops as Internet shopping sites are "open" twenty-four hours a day.

New Internet technologies also enable Internet vendors to provide a level of personalised service which was traditionally impossible (Ghosh 1998, p. 128). Through the use of such functions as Internet "cookies", Internet vendors can amass personal data on consumers' and their product preferences (Bruner 1997). With this information, Internet vendors can tailor their websites to meet their customers' perceived needs (Wallace 1995). Information on subjects which interest regular customers can be provided as additional services. Online shoppers thus benefit from a form of customised service which conventional shoppers may not enjoy.

1.1.2 Purchase consummation

In the second phase of an online shopping transaction, the consumer places his/her order and authorises payment through the different means available. Presently, online shopping transactions can be paid for in four key ways – credit, debit, cheques

and pre-paid cash mechanisms (Laudon and Laudon 1998; Leer 2000). Ideally, the consumer would then receive the product in the condition, time and manner on which he/she and the vendor had agreed.

The absence of a secure payment system has been the greatest hindrance to the diffusion of online shopping. Many surveys have shown that security concerns are the most common causes for consumers' resistance to online shopping. In a recent survey of Internet users, 79 per cent of non-adopters of online shopping expressed their dislike for sending credit card or other personal information over the Internet (Horrigan 2000). Such fears are compounded by the fact that in e-commerce transacted via the Internet, few consumer protection mechanisms exist to deal with transgressions by Internet-vendors. Due to the global nature of the Internet, e-commerce transactions can transcend national boundaries. This makes it difficult for the application of national consumer protection laws which have little efficacy in protecting consumers in the global economy and in cyberspace (Goldring 1996). Consumers often have no recourse in cases of fraud, poor service or security and privacy breaches by Internet-vendors. However, in the purchase consummation stage, there are some tangible benefits for consumers. The online shopper enjoys convenience in many ways. Given the speed of communication via the Internet, the consumer can place his/her order with the expectation that it will be more quickly processed than in other home shopping methods like mail order. Furthermore, submitting his/her credit card information online is much less cumbersome than posting a cheque by mail.

1.1.3 Post-purchase interaction

In the third and final phase of an online shopping transaction, the consumer and the vendor may engage in post-purchase interaction, known in conventional retailing as "after-sales service". Should the consumer have any doubts as to how to use the item he/she purchased, he/she may wish to contact the vendor for assistance. In the case of brick-and-mortar stores, consumers can either visit or telephone the store for advice. In the case of an online store, many retail sites provide customer-service in the form of a Frequently Asked Questions section which shoppers may refer to. Many sites also provide consumers with means of submitting queries to the online store through email, phone or fax. The satisfaction which the consumer

derives from such online services would depend on the quality and speed of the service delivered.

1.2 A Brief Review of Psychological Action Theories

To study the action structure of typical online shopping acts in a systematic fashion, it is imperative to select a theory which allows us to study actions meaningfully. Due to the novelty of e-commerce and the paucity of research on the social psychological dimensions of online shopping acts, it is important to adopt a theory that provides for a more descriptive understanding of online shopping acts. In this regard, the theory of activity and goal-directed action is eminently suitable.

In this regard, a brief review of alternative action theories is undertaken here, and a justification for adopting the theory of activity and goal-directed action is presented.

1.2.1 The central tenets of alternative theories of action

Several action theories have been proffered, of which the most influential is arguably Fishbein and Ajzen's theory of reasoned action (1975). This theory proposes the Expectancy-Value model (Figure 1.1), where the likelihood of an action being performed is contingent on the value of the goal which the action/behaviour will achieve, and the expectancy that the action/behaviour will actually achieve the goal. A person's intention to perform a volitional behaviour is thus the prime determinant of that action. This intention is in turn determined by the person's attitude towards performing that particular behaviour as well as the subjective norms governing whether the person should or should not perform the behaviour in question. The attitude towards performing that behaviour is based on the person's salient beliefs about it. For example, a person may have a negative attitude towards shopping because he/she believes that it is a frivolous and unchallenging activity. Such beliefs are termed "behavioural beliefs" (Ajzen 1985, p. 14). The subjective norm governing the performance of a behaviour is based on the person's normative belief as to whether he/she is under any social obligation to perform that behaviour.

Figure 1.1 Expectancy-Value Model (Fishbein and Ajzen 1975)

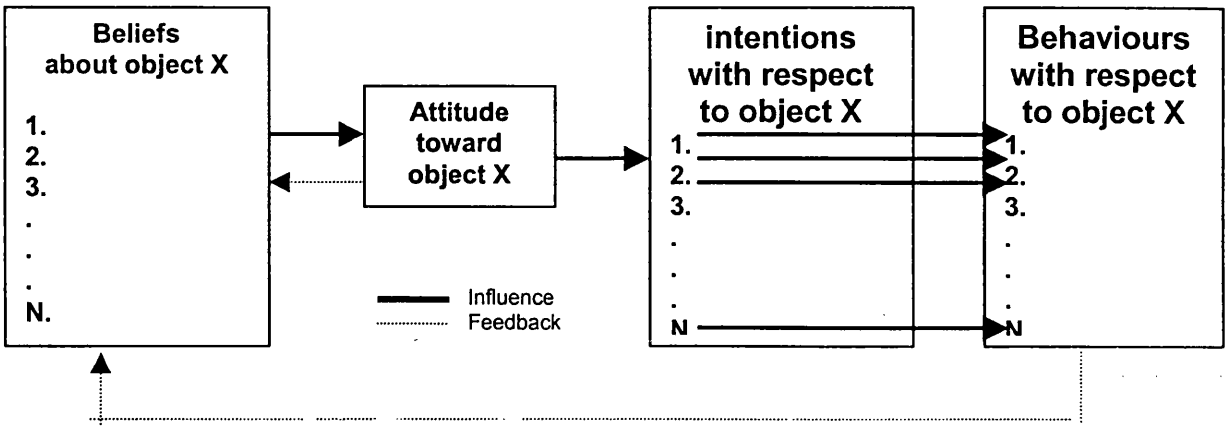
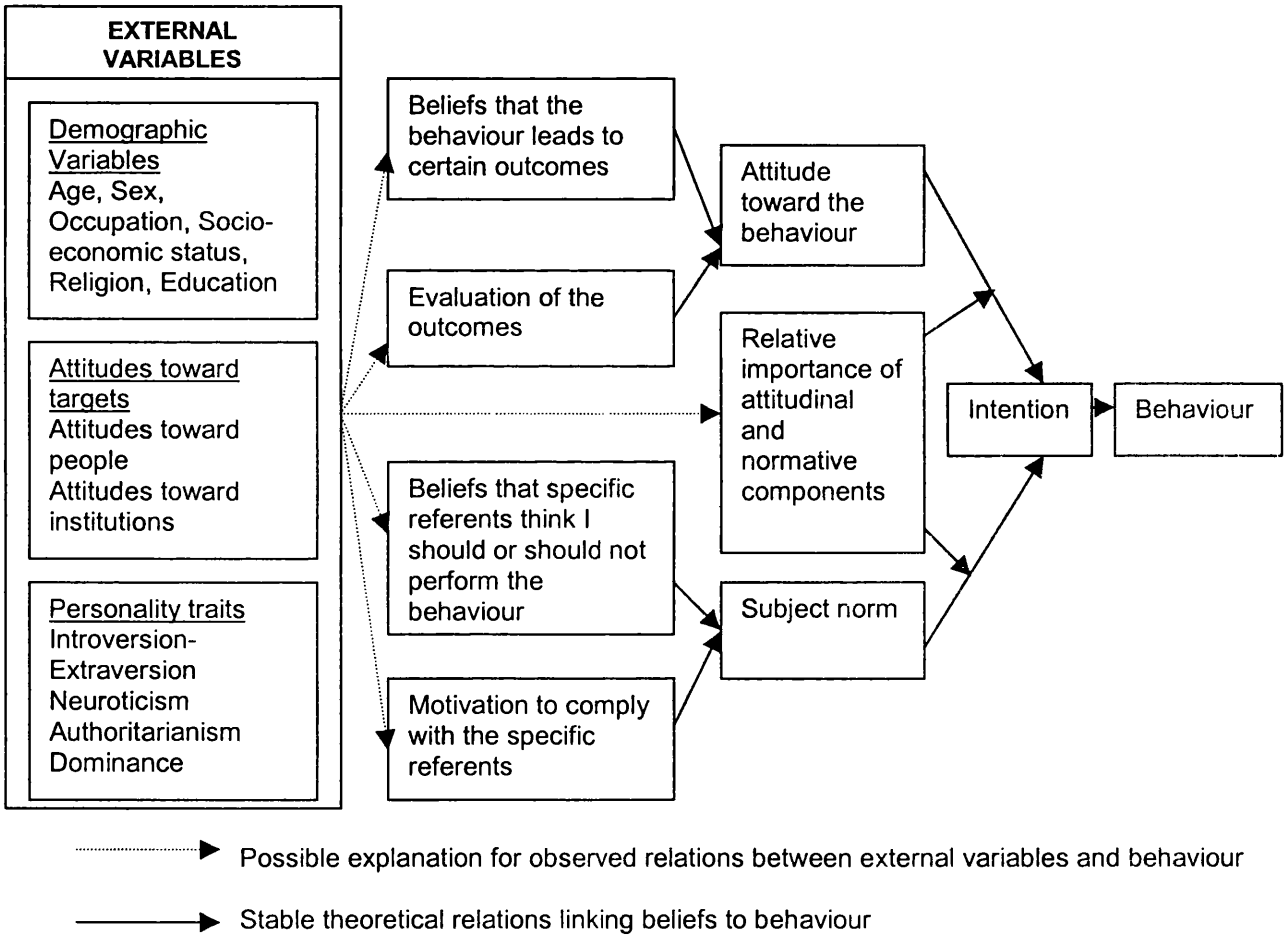


Figure 1.2 Indirect Effects of External Variables on Behaviour (Ajzen and Fishbein 1980)



Recognising that the theory of reasoned action was unable to adequately predict the outcome of an action from the actor's intention, Ajzen and Fishbein (1980) formulated the theory of planned behaviour (Figure 1.2). The theory of planned behaviour assumes that behaviour is planned, but that the discrepancy between the behavioural intention and the outcome of the behaviour is due to the actor's inability to control external factors impinging on the behaviour. Therefore, the more effort an actor expends in performing an action, the greater the control he/she exerts over personal and external factors and the increased likelihood that the behavioural goal will be achieved.

1.2.2 Critiques of Expectancy-Value action theories

The theory of reasoned action and the theory of planned behaviour, both of which utilise the Expectancy-Value approach, are inadequate for a proper study of online shopping actions for the following reasons.

1.2.2.1 Inability to accommodate habitual, self-regulated behaviour

The theory of reasoned action and the theory of planned behaviour have been criticised for their inability to accommodate habitual, self-regulated behaviour which constitutes a significant proportion of everyday activities, e.g. driving (Kruglanski and Klar 1985). Habitual, self-regulated behaviour is seldom carried out with the actor's conscious consideration of whether societal norms prescribe or conscribe such behaviour, or indeed of his/her attitude towards performing that behaviour. Similarly, habitual actions tend to be automatic and are performed without conscious control by the actor, e.g. driving a car. Many habitual online actions can be automatic as well, e.g. logging on to an email account. The Internet user does not actually have to exert conscious control over the process of keying in his/her I.D. and password.

1.2.2.2 Inability to accommodate reactive behaviour

One could extend this critique to say that the theory of reasoned action and planned behaviour is also unable to account for reactive behaviour. The two theories presuppose that actors exert conscious control over *all* of their actions. However, conscious actions can be made up of reactive action steps where the actor's behaviour

unconsciously or subconsciously changes in light of external stimuli such as circumstantial and environmental fluctuations. For example, the phenomenon of impulse purchases cannot be accommodated by the two theories as the consumer is presumed to buy what he/she has planned and intended to buy. The consumer may have planned to buy something, but in response to the stimulation of product displays and attractive prices, he/she may reactively and impulsively purchase something different from what he/she had intended. Nonetheless, his/her original intention to buy something was indeed planned.

1.2.2.3 Over-dominance of the Expectancy-Value model

Furthermore, the theory of reasoned action and the theory of planned behaviour have also been criticised for assuming that all actors perform their actions according to the Expectancy-Value model when this may not necessarily be the case. An individual's intention and attitude are not the only determinants of whether an action is performed. The motivation state of the individual and self-regulatory processes also affect whether an action is performed or not. Kuhl (1982; 1985) argued that an actor's state- or action-orientation mediates between his/her action intention and performance of an action. State-oriented individuals tend to perform actions for their own sake while action-oriented individuals perform actions to fulfil extraneous needs. Kuhl's finding therefore reveals the weakness of the Expectancy-Value model.

1.2.3 The strengths of the theory of activity and goal-directed action

Consumer psychologists stress that the study of shopping behaviour necessitates a theory which can accommodate both the mechanistic and cognitive aspects of purchasing and which emphasises the study and analysis of observable processes (Markin 1977). Cranach, Kalbermatten, Indermuhle and Gugler's (1982) theory of activity and goal-directed action satisfies these requirements. It introduces the useful framework of seeing behaviour as comprising a supergoal, concrete action goals and sub-goals. At the same time, it introduces the concept that actions comprise action steps - some of which are cognitively controlled on the strategic level, and some of which are subconsciously self-regulated on the operational level. Subconsciously self-regulated actions can therefore be

performed in reaction to external factors beyond the actor's control. This is in contrast to Fishbein and Ajzen who see behaviour as a monolithic entity that is either intended or not intended by the actor. Crucially, the theory of activity and goal-directed action can comfortably accommodate Kuhl's important concept of state-orientation versus action–orientation, which has important implications for consumer research.

The theory of activity and goal-directed action is thus a useful "frame theory" which can serve as an overarching theoretical structure into which other theories on individual action and consumer behaviour can be integrated (Cranach 1996, p. 152).

1.3 Online Shopping as Goal-Directed Action

Goal-directed action is defined as "a type of behaviour that is (in part, at least) conscious, directed towards a goal, planned and intentional (or willed)" (Cranach *et al*, 1982, p. 16). This definition is explained in greater detail by Cranach (1982). A goal is the desired outcome of an action as envisioned by its actor. A plan is the blueprint for an action, involving the actor's consideration of alternative means of carrying out the action. A goal-directed action is seen to be intended when its actor executes it volitionally. And finally, if the actor is subjectively aware of any action-related cognitions, the action can be considered to be conscious. (It should be noted that not all action-related cognitions are conscious as in the case of self-regulated behaviour such as motor habits.) In this regard, online shopping can be seen essentially as conscious behaviour which is directed towards the goal of acquiring products or product-related information. Shopping is considered to be an ordinary interactive action as opposed to a labour action such as working (Cranach and Kalbermatten 1982, p. 115).

Actions comprise action steps. A "concrete action" refers to the performance of concrete and observable action steps for the realisation of an immediate goal. An action is therefore a particular kind of behaviour that is cognitive in nature. However, Cranach *et al* (1982) qualify that the line between action and mere behaviour cannot be clearly delineated. Indeed, an action need not be simultaneously "goal-oriented, conscious, planned and purposeful" but can exhibit varying levels of each quality throughout the course of the action. For example, an action step within a goal-directed action may

comprise reactive behaviour which is neither planned nor purposeful, but is nonetheless conscious and goal-oriented.

The nature of a goal-directed action is affected by its structural, process and dispositional dimensions. The structural dimensions comprise the course of the action and its organisation levels. The processes include goal generation, goal enactment, goal protection (action orientation) and goal energisation in reaching a desired aim. It is important to distinguish in particular between dispositions and processes. Processes are short-term cognitions which guide actions while they are being executed. Dispositional dimensions include the relatively stable knowledge and value structures which guide actions. The next three sections explain these dimensions of goal-directed actions. Where relevant, consumer psychology and human-computer interaction theories which can be integrated with the theory of activity and goal-directed action for a better understanding of online shopping will be included.

1.4 Hierarchical-Sequential Structure of Goal-Directed Actions

Goal-directed actions can be studied at their molar and molecular levels to discern the course of the actions and the levels at which the actions are organised.

1.4.1 Course of action and sequence of steps

Actions have three main components: intention, implementation by operations and comparison between the desired result and the original intention through a feedback process (Hacker 1982a). On a micro-level, an action has both a starting and an end point and is composed of action steps (Cranach, Kalbermatten et al. 1982). Action steps are the smallest units of an action and different steps are linked at intersections. At each intersection point, there may be a multiplicity of divergent action steps. The different courses of action between the same starting and end point form a route network. The consumer of today can execute his/her shopping actions through a variety of media and methods. Therefore, between the starting and end point of a consumer's shopping action there exist different courses of action where the consumer can research and make a purchase using a mixture of online and conventional shopping options.

The theory of activity and goal-directed action also assumes the existence of bidirectional adaptation in action, where action is directed both towards meeting the actor's internal needs and towards fulfilling the demands of the actor's external environment (Cranach, Machler et al. 1985). The action is therefore the link between an actor and his/her environment and "each affects and adapts to the other" (Brenner, Ginsburg et al. 1985, p. 4). Cranach et al., (1982, pp.38 – 39) also assert that in empirical research, the social meaning of a situation and its impact on action should be studied in three dimensions: "the spatial dimension, the temporal aspects and the participants (interacting social subjects)". The social context of online shoppers should therefore be studied in these dimensions as well.

1.4.2 Hierarchy of organisation

Hacker (1985) asserts that the hierarchical-sequential organisation of actions is a well-proven proposition. There have been many perspectives on the hierarchical organisation of action, stemming from the original model proposed by Miller, Galanter et al. (1960). Clarke (1982) for example argued that the planning of activity takes place from the larger activity units down towards its smaller component units. Similarly, Cranach, Kalbermatten et al. (1982) argued that actions are ordered by a goal structure comprising supergoals, concrete action goals and sub-goals. These component goals are ordered hierarchically and sequentially. In the event that there are several different end states of the action, then parallel goals exist and these goals are ranked as main and side goals (Cranach, Kalbermatten et al. 1982).

Cranach (1982) proposed that actions are organised hierarchically on three levels – goal determination, tactics and operations. First, on the goal-determination level, the actor cognitively determines the hierarchy and sequence of goals by choosing and prioritising his/her goals. An actor's supergoal will influence how he/she selects action goals to achieve the supergoal. These action goals comprise action steps, each of which has its own sub-goal. Indeed, many situations in human behavioural life involve individuals having to decide amongst a host of action alternatives and not knowing with certainty which goal they are striving for (Kluwe and Friedrichson 1985). In pursuing complex goals which have several components, individuals will be required to prioritise

which sub-goal to attain first, i.e. to fix as a "main point" (Dorner 1982, p. 27). It is also likely for individuals to vacillate between different sub-goals despite having identified a main point. In Ordinary Interactive Action, the actor enjoys a high degree of freedom in terms of choosing between different goals, and modifying or abandoning his/her goals (Cranach and Kalbermatten 1982). These processes of goal determination all play a role in directing action.

Second, on the tactical level, the course of action is cognitively controlled based on the different sub-goals which lead to the ultimate goal. Finally, on the operational level, the action steps are ordered through self-regulatory processes. Motor habits and fixed action patterns are examples of self-regulated actions. Cranach (1986) also argued that goal-directed actions can be constituted by reactive behaviour, i.e. behaviour which is performed in response to external stimuli. Reactive behaviour helps its actor to adapt to changing environmental circumstances. Indeed, Cranach (1986) asserts that much goal-directed behaviour can be considered to be reactive behaviour but on a higher order. These three organisational levels of action are by no means independent of each other. Instead, the processes of goal-determination, social and cognitive control and self-regulation are interconnected in a web of reciprocal influence.

1.5 Processes in Goal-Directed Action

Short-term cognitive processes govern the flow and execution of goal-directed actions. These are cognitive processes which occur only during an action and not after. These cognitive processes can be classified under three broad categories – goal generation, goal enactment and goal protection. Each of these processes will be discussed in detail as follows.

1.5.1 Goal Generation

Goals are "images of a reality not yet existing but rather to be created, and thus they link present and future" (Hacker 1985, p. 74). Therefore, goal generation involves coding the anticipated end-state of an action into an internal, mental representation (Hacker 1982a; Hacker 1982b). A goal thus drives the performance of action and can be seen as a motivational "'force' or 'tendency' that directs and amplifies, initiates and

terminates, co-ordinates and delineates the cognitive and motor processes" (Heckhausen 1991). Empirical research for this thesis sought to identify the nature of goal generation processes in online shopping.

1.5.2 Goal Enactment

Kluwe and Friedrichson (1985) assert that the execution of plans needs to be monitored and regulated to ensure that actions reach their desired goal state. Hacker (1982b, p. 18) argues that goals themselves serve an action-regulating function by acting as an internal model of the desired result. To enact a goal, an actor exercises cognitive control by planning and strategizing his/her actions. This involves the cognitive anticipation of the end result of possible courses of actions. Hacker adds that there are action monitoring cognitions which guide the design and modification of actions so that goals can be better achieved (1985). A feedback process of "checking" the action implementation against the desired result takes place (Hacker 1985, p. 69).

To convert a plan into action, resolve is required. A resolve is a "cognitive, motivational and emotional process" (Cranach, Kalbermatten et al. 1982, p. 87). A strategy is composed of hierarchically-ordered plans. Strategies are influenced by the past experience and priorities of the actor. In the course of executing plans and strategies, the actor has to decide which action steps to take, especially at intersection points when there is a divergence of possible action steps. This is particularly true in the case of non-routine Ordinary Interactive Action, where the actor's internal model of action must be dynamically adapted to meet situational demands (Cranach and Kalbermatten 1982). In the case of shopping, individuals often devise shopping strategies to maximise the efficiency of time and resource usage (Darden and Dorsch 1990). This thesis establishes empirically how online shopping actions are planned and executed, i.e. it will identify typical goal enactment processes in online shopping.

1.5.2.1 Attention processes

Hacker postulated that there are three categories of action-directed mental processes: (i) processes causing and guiding action, (ii) processes accompanying action but not guiding them and (iii) processes explaining or justifying the action (Hacker 1985).

Mental processes which play the key role of guiding and directing action are therefore conscious cognitions which demand the attention of the actor. Consciousness is also aroused when special difficulties in executing actions arise and the actor's cognition becomes conscious in order to organise the action (Cranach, Kalbermatten et al. 1982). Harre (1982) added that consciousness also comes into play when there is ambiguity about goals or the means to achieve them. In the absence of difficulties, action-related cognitions can remain subconscious.

Conscious cognitions involve information-processing activities which can be encoded using linguistic and symbolic systems. With regard to shopping, the action steps of information-processing and decision-making are likely to involve conscious cognitions. Grunert (1989) has however argued that a large proportion of consumer decisions is not based on a large degree of conscious thinking or strategic cognitive processing. Instead, a lot of information processing by consumers is unconscious. This thesis explores how attention processes and conscious cognitions come into play in online shopping and when they do so.

1.5.2.2 Interactive actions

When social interaction takes place between different actors, there are objective and subjective connections between each actor's goal structures. Objectively, connection occurs because the actors' actions share the same situational and social milieu. Subjectively, connection occurs because of the mutual understanding and perceptions of one another's action steps. Interaction is a form of behaviour of different actors involving reciprocal influence amongst the actors. Interactive behaviour which serves as concrete action is termed interactive action. Communication is therefore a form of interactive action. It involves the exchange of information between different parties. Communication which serves as concrete action is termed communicative action. This thesis seeks to establish the interactive actions which online shoppers engage in.

1.5.3 Goal Protection and Self-Regulation

When an actor forms an intention to satisfy a specific goal, that goal intention needs to be protected from competing action tendencies (Kuhl 1985). The activity of goal

protection is often termed as self-regulation. Unlike attention processes which are conscious, self-regulation involves subconscious monitoring mechanisms that adapt action to the actor's inner-state as well as to varying environmental demands. Self-regulation and adaptation are therefore internally and externally directed towards behaviour that is not subjected to conscious or voluntary control, e.g. motor habits. Internally directed adaptation promotes or constrains behaviour leading towards the sub-goals of action steps. Externally directed adaptation modifies action steps on the operational level, even though on the goal-determination and strategic level, the general course of action remains unchanged. Both internally and externally-directed forms of self-regulation affect whether and how a sub-goal is attained. An action-orientation helps to self-regulate actions by inducing the formation of strong intentions and inhibiting the emergence of alternative action tendencies. Action-orientation can be both a cognitive process and a disposition, as will be seen in section 1.7.3.1.

1.6 Dispositions in Goal-Directed Action

Goal-directed actions are also influenced by two types of dispositions - long-term cognitive processes and short-term self-regulatory processes. Long-term cognitive processes are dispositions which are inherent in the actors, having developed over a prolonged period and through different varieties of acts undertaken by the actors. They are usually stable and unchanging and constantly guide an individual's actions. These dispositions include mental representations such as memory and knowledge structures. They also include value structures such as attitudes and social conventions. The motivation state of an actor also affects his/her actions and is in turn influenced by self-regulatory processes. Self-regulatory processes can also be considered dispositions which have developed over time. However, they do not guide actions but affect the motivation state of the actor to execute his/her actions. These self-regulatory processes tend to exert influence only during the execution of an action and they include state-orientation and flow. Each of these long-term mental representations and short-term self-regulatory processes will be discussed.

1.6.1 Mental Representations

Mental representations are long-term cognitive processes relating to an actor's store of relevant knowledge which pertains to and guides his/her actions. This relevant knowledge is usually tactical knowledge which is utilised by the actor in planning his/her action steps.

1.6.1.1 Relevant knowledge

Action serves an adaptive function. To adapt an action to reality, the actor needs to possess knowledge which is relevant to the adaptive action. Knowledge is therefore actively harnessed by the actor at the goal determination and strategic levels of action to anticipate and plan alternative courses of action. Action-related knowledge can actually be differentiated into knowledge and skill (Brenner 1985, pp. 208 - 209). Skill is also required for the actor to perform an action to obtain the intended result.

Cranach divided action-related knowledge into eight classes: (i) positive and negative values: entrenched, general cognitions which are avoided or aspired to such as kindness and integrity; (ii) general knowledge of basic rules of interaction which are accessible to all levels of society; (iii) knowledge of norms and rules which include regulations applicable to specific situations; (iv) context knowledge pertaining to activities in general; (v) situation-specific knowledge about the details of the situation in which an act is performed; (vi) personality knowledge about human nature and how they interact; (vii) person-specific knowledge about action partners; and (viii) planning and action knowledge on planning, strategising and operationalising particular acts (Cranach, Machler et al. 1985). Research has also been conducted specifically on the knowledge bases of consumers. Selnes and Troye (1989) conceptualised consumer knowledge as expertise which has four dimensions: (i) specific knowledge about the attributes of different brands and brand preferences, (ii) general knowledge about the attributes of particular product categories, (iii) general purchasing expertise and (iv) general problem-solving skills and intelligence. This thesis establishes the types of relevant knowledge which online shoppers typically utilise and the dimensions of their consumer expertise.

1.6.1.2 Memory processes

Memory processes are another type of mental representation affecting action. An actor knows how to act in a particular situation according to a "script" stored in his/her memory. "Scripts" or specific knowledge enable actors to interpret actions according to a pre-determined, stereotyped sequence of actions which characterise familiar situations (Schank and Abelson 1977). It should be noted that memory processes are distinct from knowledge processes because they may affect not merely conscious cognitions but also sub-conscious cognitions and automatic actions. An actor who has performed a particular action so many times may find that his/her actions become automatic because he/she can remember the sequence and content of the action steps, e.g. driving a car (Bargh and Bardollar 1996). In which case, he/she does not need to exert conscious control over his/her actions.

1.6.2 Values

Values are assumed to constitute a person's central cognitive structures and influence action in the form of goal-selection. Values can be located anywhere along a positive-negative continuum. Actors strive to realise positive values and to avoid negative values. This value system is used to evaluate goals and goal-directed actions, resulting in a "preference hierarchy" of actions or an attitude (Cranach et al, 1982, p. 93).

1.6.2.1 Attitude processes

According to the theory of concrete actions, outwardly directed action results from special cognitive processes which govern behaviour. These cognitive processes are attitude processes which relate the actor's values to his/her actions. Indeed, Hacker (1985) argues that when actors set about performing self-set tasks to achieve certain goals, these tasks are redefined by the actor in terms of his/her likelihood of success and his/her needs, personal values and attitudes. These attitudes therefore guide the performance of goal-directed behaviour, especially at intersection points when choices between different action steps have to be made. Cranach adds that in Ordinary Interactive Action such as shopping, even the most trivial of decisions is value-relevant and the actor will use his/her value system to make decisions (Cranach and Kalbermatten

1982). This thesis will identify the values and attitudes which govern online shopping behaviour.

1.6.2.2 Social norms

Actions possess social significance because they reflect and are determined by the conventions of the society in which they are performed. Actions need to be located within their local social orders and related to the attendant social conventions (Harré 1982). Over time, these social conventions are internalised by the actors and influence the course of their actions. Actions are thus subjected to social control in the form of conventions, rules and norms that influence conscious cognitions and self-regulated behaviour.

Conventions arise from social agreement within a community and broadly determine whether an action accords with or contravenes a social agreement. Rules are conventions which guide behaviour. They guarantee some degree of regularity in the performance of an action and instil in the actor a conception of the appropriateness of his/her actions and feelings of obligation where applicable. Rules are often enforced by sanctions and this translates the rules into norms. When an action goal comes into opposition with a norm, the action is inhibited on the strategic and operational level. This thesis seeks to uncover the conventions, rules and norms which influence online shopping behaviour.

1.6.3 Motivation state

Wright and Brehm (1989) postulate that if someone is trying to achieve an attractive goal, the attractiveness of that goal will increase with the corresponding rise in motivational energy required to achieve it. The amount of motivational energy which the actor possesses depends on what he/she believes can, will and must be done to satisfy a motive. If a motive is easily satisfied, less energy is required. However, if a motive is impossible to satisfy, the inclination to attempt to satisfy it is much reduced and energisation is low. Therefore, only goals which are seen as challenging, yet attainable and meaningful, will yield discernible effort and motivational arousal. Unpleasant outcomes which are inevitable will also result in low energisation. Two self-regulatory processes affect the motivation states of the actors – state-orientation and flow.

1.6.3.1 State-orientation and action-orientation

Kuhl's action-control theory (1982; 1985) posits that current action is dependent on the establishment of a dominant action tendency from among many competing action tendencies. Self-regulatory processes are necessary to identify and maintain an action tendency as the dominant one. Given this premise, people can be classified as having either "state-orientation" or "action orientation". A state-oriented person has a cognitive structure which is guided more by social and emotional elements and is thus more susceptible to external interference. State-oriented people thus have a diminished ability to self-regulate their behaviour.

On the other hand, action-oriented people form strong intentions before commencing an activity and their plans are less likely to change because of their higher resistance to external interference. They have a tendency to develop emotional and environmental mechanisms to suppress competing action tendencies which may divert them from their original goals and intentions. State-oriented individuals perform actions for their own sake while action-oriented individuals perform actions to fulfil extraneous needs.

Babin and Darden (1995) applied action-control theory to consumer research, studying the varying effects of the retail environment on action-oriented versus state-oriented shoppers. They concluded that state-oriented shoppers are less likely to regulate their behaviour and are therefore more susceptible to contextual influences such as the store environment and product displays. The concept of state-orientation and action-orientation can be used to understand the behaviour of online shoppers as well. This thesis seeks to understand whether an online shopper's self-regulatory processes impinges on his/her online shopping behaviour, e.g. his/her susceptibility to interactive website interfaces, his/her tendency to utilise search engines to locate products rather than to surf websites indiscriminately etc.

1.6.3.2 Flow

Another self-regulatory process which can affect the actor's motivation state is flow. The concept of flow – "the process of optimal experience" - can be usefully applied

to online shopping behaviour (Csikszentmihalyi 1988; Csikszentmihalyi and LeFevre 1989; Csikszentmihalyi 1990). Flow experiences have several characteristics. When an individual experiences flow, he/she is engaging in an activity which he/she finds so intrinsically enjoyable that he/she loses a sense of self-consciousness and his/her sense of time is distorted. The individual feels in control of his/her own actions, which are goal-directed. The flow construct has been applied to individuals in hypermedia computer-mediated environments such as online retail stores on the World Wide Web (Hoffman and Novak 1996; Novak, Hoffman et al. 2000).

Situational factors such as vividness and interactivity play a part in inducing flow in computer-mediated environments. While the physical hardware used in surfing the World Wide Web such as keyboards and the mouse inhibit greater involvement with the online interface (Jacob 1996), high levels of media vividness in the on-screen content can promote interface involvement (Dennis and Kinney 1998). Steuer introduced the concept of telepresence – "the mediated perception of an environment" (1992, p. 76). When an individual experiences telepresence, he/she feels more a part of the computer-mediated environment and becomes less aware of his/her immediate physical surroundings. Telepresence is in turn dependent on two key technological characteristics of the medium – the vividness of the information presented and the level of interactivity offered by the medium. The higher the degrees of vividness and interactivity, the more consumers will feel immersed in the computer-mediated environment, the more time they will spend time in that environment and the more likely they are to experience positive affective feelings. This thesis aims to discover whether flow affects online shopping actions and if so, in what ways.

1.7 Review of Literature on Online Shopping

Prior research on business to consumer Internet shopping behaviour has adopted different research strategies and focused on several different dimensions. Many studies have taken a strict quantitative data mining approach towards interpreting Internet shopping behaviour in studies such as Song (2001) and Lee (2000). This quantitative approach produces results efficiently and is supported by quantitative data but fails to capture the social psychological dimensions of online shopping. Therefore, while this

approach has been of benefit to the development of the field, it has not contributed significantly to a more multi-faceted understanding of online shoppers. It views the online shopper as a rational information processor, overlooking the impact which the dispositions, motivations and socio-economic backgrounds of online shoppers have on their online shopping actions. The following literature review covers research which focused specifically on online shoppers and their online shopping behaviour. This thesis aims to supplement existing quantitative research on online shopping by adopting a qualitative approach to understanding online shopping behaviour. It also aims to complement existing qualitative research by taking an action psychology approach to understanding online shopping behaviour and through the adoption of a novel research method.

1.7.1 Demographic, personality and lifestyle characteristics of online shoppers

Extensive research has been conducted on the demographic characteristics and personality and lifestyle profiles of online shoppers. Age has been shown to be a significant determinant of online shopping behaviour. Donthu and Garcia (1999) suggest that Internet shoppers are generally older and have higher incomes than Internet non-shoppers. Similarly, Bhatnagar, Misra et al (2000) established from their study that older consumers and people who spend more time using the Internet are more likely to make online purchases. Gender differences in online shopping behaviour are also apparent. Li, Kuo et al (Li and Russell 2000) established that while there is no significant gender difference between people who shop online and those who do not, men are more likely than women to make online purchases. A recent study by Van Slyke, Comunale et al (2002) also shows that men rate the compatibility, relative advantage, demonstrability and trustworthiness of online shopping higher, and its complexity lower than women do.

Educational levels and exposure to IT have also been shown to influence online shopping behaviour. Li, Kuo et al (2000) found that online buyers tend to be more educated, are more knowledgeable about how the Internet works, are more concerned about the convenience rather than the experiential dimensions of online shopping and perceive online shopping to be superior in terms of accessibility and product distribution. Similarly, the findings of a study by Liao and Cheung (2001) suggest that exposure to IT

education significantly affects consumers' willingness to shop online. User experience with the Internet and online shopping also contribute to differences in Internet buying behaviour (Lynch and Ariely 2000; Shiu and Dawson 2002).

With regard to the personality and lifestyle profiles of online shoppers, Donthu and Garcia (1999) assert that Internet shoppers are more convenience-seeking, innovative, impulsive, variety seeking and less risk averse than the non-Internet shoppers. Internet shoppers also tend to be less brand and price conscious than non-Internet shoppers and have a more positive predisposition towards advertising and direct marketing. Bellman and Lohse (1999) argue that people who like to use new communication technologies and who lead a time-starved lifestyle are more likely to shop and buy online. It has been further established that consumers with an innovative predisposition towards online buying displayed more prolonged Internet use, more frequent Internet purchasing and a higher likelihood of making future Internet purchases (Citrin, Sprott et al. 2000; Limayem, Khalifa et al. 2000; Goldsmith 2001). Differences in Internet buying behaviour also vary with the home country or region of Internet users (Lynch and Ariely 2000; Shiu and Dawson 2002).

The general online behaviour of online shoppers has also been studied and correlated with online shopping behaviour. Bellman and Lohse (1999) argued that people who spend more time online than most are more likely to shop and buy online. Further research has shown that higher amounts of Internet use in general is associated with an increased amount of Internet product purchases (Bhatnagar, Misra et al. 2000; Citrin, Sprott et al. 2000; Liao and Cheung 2001). In addition, Korgaonkar (2002) concluded that heavier web users have a more positive attitude towards web advertising which leads in turn to more online purchases and more money spent in these purchases. Shim, Eastlick et al (2001) established that consumers' intention to use the Internet to search for information is the strongest predictor of Internet purchase intention. In the same vein, Kwak, Fox et al (2002) also established that online shoppers who frequently request product information are more likely to make online purchases.

Consumers' propensity to experience flow online has also been identified as a determinant of online shopping behaviour. It has been postulated that consumers who experience the flow state while surfing online stores benefit from increased learning, exhibit more exploratory behaviours and more positive subjective experiences (Hoffman and Novak 1996; Novak, Hoffman et al. 2000). Hence, these positive consequences encourage such consumers to pay frequent, repeat visits to these online stores and to spend a longer time at the stores. These findings were corroborated in a recent study by Rettie (2001) which involved focus group participants, half of whom admitted to having experienced flow and to prolonged Internet and web usage.

1.7.2 Motivations for and deterrents against online shopping adoption

Torkzadeh and Dhillon (2002) assert that to motivate online shoppers, online retailers need to offer convenience, good customer relationship management and maximum product value at minimum product cost. However, research has shown that while there are many motivations for shopping online, consumer ambivalence towards online shopping occurs as a result of the concurrent risks involved. Bhatnagar, Misra et al (2000) assert that some consumers are less likely to be Internet shoppers because they perceive that the risks outweigh the benefits. Similarly, Vellido, Lisboa et al (2000) identified that the factor most likely to predict consumers' propensity to buy online are risk perceptions, while other factors such as convenience and control over the shopping process, affordability of products, customer service and usability of online shopping sites are slightly weaker predictors. Elliot and Fowell (2000) suggest that while online shoppers are generally satisfied with the convenience, customised service and increased product range, their reservations about the security, ease of use and levels of service offered constrain the growth of online shopping. Similarly, Vijayasarathy and Jones (2000) concluded that product value, pre-order information, post-selection information, shopping experience and consumer risk are important factors influencing consumers' attitudes and intentions to engage in Internet and catalogue shopping. Stark and Meier's (2001) study of online shopping amongst college students suggests that while most are generally satisfied with their online purchases, security fears are still the main deterrent to shopping online. Ranganathan and Ganapathy (2002) concluded from their survey

findings that security and privacy has a greater effect on the purchase intent of consumers than the information content and the design of retail websites. Miyazaki and Fernandez (2001) related levels of Internet experience to risk perceptions and online shopping activity. They concluded that higher levels of Internet experience may lead to lower risk perceptions of online shopping, system security and online retailer fraud but to more concerns about online privacy. Online shoppers who have had experience with other remote purchasing methods are also more likely to have lower risk perceptions regarding online shopping.

A corollary of the issue of risks in online shopping is the crucial issue of trust. Jarvenpaa, Tractinsky et al (2000) proposed a model of consumer attitudes towards websites. According to this model, the level of trust which the consumer has in an online store is positively related to the attitude towards the store and inversely related to the perception of risk involved in purchase from the store. This model was supported by data from three countries – Australia, Israel and Finland (Jarvenpaa and Tractinsky 1999). Tan and Thoen postulate that "transaction trust" is made up of trust in the party which one is transacting with (party trust) and trust in the control mechanisms which are supposed to enhance the security of the transaction (control trust) (2000, p. 65). However, they add that such control mechanisms only work if consumers understand a control mechanism. Indeed, Lunt (1999) observed that resistance towards adopting online shopping is due to the "knowledge gaps" in the public's understanding of e-commerce. Roy, Dewit et al (2001) established that the quality of a retail website's user interface plays a key role in establishing trust with the consumer. Similarly, Lynch, Kent et al (2001) found that the quality of a site and a consumer's trust in it determine purchase intentions and customer loyalty. McKnight and Chervany (2001) studied the effects of web vendor interventions on consumer behaviour and asserted that the effects of these interventions are influenced by consumers' trust in the intentions and beliefs of the vendors. Lee and Turban (2001) assert that the integrity of the online retailer is a key determinant of consumer trust in online shopping and this trust is moderated by the consumer's trust propensity. The consumer's trust in the Internet medium is another key component of consumers' trust in online transactions. Grabner-Kraeuter (2002) asserts that the level of trust a consumer has in online shopping varies according to the level of system-dependent uncertainty (the

functioning of the hardware and software) and transaction-specific uncertainty (the quality of the products and the reliability of the retailer).

1.7.3 Situational factors

Other studies have focused on the situational factors which affect online shopping behaviour. Swaminathan, Lepkowska-White et al (1999) suggest that perceived vendor characteristics, particularly price competitiveness and the ease of cancelling orders, affect the frequency of purchases on the Internet. Smith and Brynjolfsson (2001) concluded from a study of shopbot consumers that brand is an important determinant of consumer choice in online shopping. Indeed, they assert in the online shopping environment where consumers have limited means of assessing the retailers' credibility, brands become especially important. Childers, Carr et al (2001) argued that the navigability of retail websites, the ability of the online environment to serve as a substitute for personal product examination and the convenience offered by online shopping are key predictors of consumers' attitudes to online shopping.

It has also been argued that the higher the degrees of vividness and interactivity, the more consumers will feel immersed in the computer-mediated environment, the more time they will spend in that environment and the more likely they are to experience positive affective feelings. Richmond (1996) discovered that consumers shopping in highly animated Virtual Reality Mark-up Language environments order more products, express greater satisfaction with their online shopping experience and display a greater willingness to conduct repeat online shopping trips. Griffith, Krampf and Palmer (2001) also demonstrated that media vivid content presentation stimulates a higher level of involvement with the products on offer and induces more positive responses. Similarly, Menon and Kahn (2002) established that if the initial experience in a particular shopping trip is more pleasurable, shoppers explore more of the website, examine more products and services and respond more positively towards promotional activities. Westland and Au (1997-98) proposed that product information which is presented in a rich and attractive virtual reality style taxes the consumer's limited attention span and may result in fewer purchase decisions being made. In addition, Koufaris, Kambil et al (2001) have established that websites which provide consumers with high levels of perceived control

and a more enjoyable experience see more repeat visits by customers and are better able to foster customer loyalty.

Another key situational factor impacting upon online shopping behaviour is the characteristics of the products and services bought and sold online. Research has been conducted on the types of products and services which consumers are more inclined to purchase online. Lal and Sarvary (1998) make a distinction between experience and non-experience goods, and argued that non-experience goods are more likely to be purchased online. Liang and Huang (1998) assert that the asset specificity of products and the uncertainty of the online shopping experience itself constitute the transaction cost of a product, wherein a product with a high transaction cost has a lower likelihood of being bought online. Similarly, Phau and Poon (2000) argue that products and services which are less expensive, frequently purchased, have intangible value proposition and are highly differentiated are more likely to be purchased online. Bhatnagar, Misra et al (2000) assert that consumers consider it riskier to buy some products online than others and argue that books and CDs are inherently less risky when compared to technologically complex and ego-related products such as perfume. This finding has been corroborated by Lowengart and Tractinsky (2001) who discovered that risk and uncertainty are more salient concerns of online shoppers when they are buying computers online than when they are buying books.

1.7.4 Retail website analyses

The design of online shopping websites and their impact on online shopping behaviour has also been studied. Many studies have undertaken business-oriented analyses of e-commerce websites to suggest web design strategies for increasing sales and enhancing corporate presence (Ho 1997; Esrock and Leichty 1998; Ha and James 1998; Esrock and Leichty 1999; Smithson 1999; Esrock and Leichty 2000; Huizingh 2000). Other studies have adopted a distinct user-centred perspective in assessing website usability. These studies have assessed website usability using a wide range of criteria. Jarvenpaa and Todd (1997) evaluated websites according to consumer concerns about product perception, shopping experience, customer service and consumer risk. Bell and Tang (1998) surveyed websites of six industry sectors and rated them according to ease

of use, content, structure and unique features. Elliot and Fowell (2000) assessed websites using customer expectations of convenience, customised service, access to wider product varieties, security, ease of use, services and cost as criteria. Wan (2000) proposed that the ability of websites to meet consumer needs should be evaluated according to their information, friendliness, responsiveness and reliability. In a similar focus on consumer concerns but applying a different methodology, Yang and Peterson (2001) content analysed consumer anecdotes of their online shopping experiences and proposed sixteen attributes for greater consumer satisfaction with retail websites. Of these attributes, responsiveness, access, reliability, ease of use and accuracy are key. Liu and Arnett (2000) and Liu, Arnett et al (2001) outlined four dimensions of website quality which will contribute to customer recall, recognition and positive attitudes towards the site's products and services. These are information and service quality, system use, playfulness and system design quality.

Barnes and Vidgen (2001) assessed online bookstores for their tangible functions, reliability, responsiveness, assurance and empathy. Zhang and Dran concluded that users utilise three types of quality factors to assess the quality of websites - basic, performance and exciting (2001, p. 18). While the most important factors across different website genres are the basic and performance factors, exciting factors are necessary for websites to fulfil consumers' unarticulated emotional and affective needs. LaRose (2001) adopted a consumer psychology perspective and analysed the impact of website design on online shopper's unregulated buying behaviour. Ranganathan and Ganapathy (2002) identified that consumers perceive the four key dimensions of B2C websites to be information content, design, security and privacy. Similarly, Aladwani and Palvia (2002) evaluated the websites of a bank, a bookshop, a car manufacturer and an electronics retailer and uncovered four dimensions of web quality as perceived by users - technical adequacy, specific content, content quality and appearance. Liang and Lai (2002) analysed online bookstores and identified three categories of customer needs – motivation, hygiene and media richness – of which hygiene needs such as transaction security and customer service are most important and media richness, least important.

These studies have focused on how the structures and design features of websites fit the information-processing model of the online shopper. Nonetheless, they are highly instructive in aiding the identification of website features which may promote, inhibit or accommodate different dimensions of online shopping behaviour. Of these studies, those of Zhang and Dran (2001) and LaRose (2001) stand out because they go beyond viewing online shoppers as mere information processors but as individuals whose online shopping behaviour have social psychological dimensions. This thesis aims to continue in that vein by analysing website usability with a prior understanding of the social psychological dimensions of online shopping behaviour.

1.8 Review of Literature on Conventional Shopping

As this thesis straddles the fields of action psychology and consumer psychology, it is imperative to conduct a review of existing literature on consumer psychology and findings on conventional shopping.

1.8.1 Motivations for shopping

Csikszentmihalyi (2000) argues that in order to fill the void in their lives which can lead to depression and despair, people engage in shopping. Indeed, there are many motivations for shopping – both tangible and intangible. The tangible motivations for shopping, i.e. the material possessions which are purchased, serve both the functional and symbolic needs of consumers. The intangible motivations for shopping include information, recreation and social gains. These tangible and intangible motivations are discussed as follows.

Like shopping, material possessions *themselves* serve both tangible and intangible needs of consumers. The social psychology of material possessions asserts that material objects are more than just possessions as they also have a strong symbolic value which is integral to the self-identity of their owners (Dittmar 1992). Research has shed light on how the symbolic and identity-constructing role of possessions impacts upon the purchase, ownership, consumption, and deprivation of material possessions. With regard to the purchase of material goods, the functional and symbolic meanings of products impact upon consumers' decision-making and purchase decisions (Ligas 2000).

Specifically, the effects of brand personality on consumer behaviour have been given considerable attention. The interaction between a consumer's self-conception and the dominant personality traits associated with brands has been shown to influence consumers' brand selections (Aaker 1999). Consumers' relationships with brands and the role played by brands in consumers' person-to-person relationships have also been explored (Grayson 1996; Fournier 1998).

With regard to the ownership of material possessions, it has been established that material possessions have both a public and a private meaning for their owners (Dittmar 1992; Richins 1994a; 1994b). The public meaning of possessions enables their owners to project a particular image of themselves, while enabling others to form impressions and inferences about them (Belk 1988; Dittmar 1992; 1994; Christopher and Schlenker 2000). The private meaning of material possessions contributes to an individual's personal identity and self-construct (Dittmar 1992). Gender differences also appear to be significant in terms of the ownership of material possessions. Women and men differ in the types of possessions they favour and their attachment to these possessions where women favour objects of sentimental value and men favour items related to leisure and finances. (Wallendorf and Arnould 1988; Dittmar 1989). The private meaning of material possessions also differs according to gender, where women tend to derive greater symbolic value from material possessions while men tend to derive greater functional value (Dittmar 1991; 1992). The relative importance of the public and private meanings of possessions also appear to differ for people of different nationalities. In a comparative study of consumers in the US and Thailand, it was found that Thai consumers place greater importance on possessions which reflect their public selves and US consumers place greater importance on possessions which reflect their private selves (Webster and Beatty 1997). It was further argued that the mere ownership of a possession leads people to view their own possessions more favourably than the possessions of others (Nesselroade, Beggan et al. 1999).

In the course of one's life, the meanings of possessions do not stay the same. Gentry, Baker et al (1995) analysed how the meaning of possessions for one's identity vary according to the course of one's life through youth, middle and old age while Silver

(1996) analysed how these meanings vary when one's life is in transition from one social network to another. Research on the social psychology of material possessions has also focused on the meanings of material possessions for specific groups of people. Miles (1996) focused on the personal meanings which young people endow in consumer goods. The role of material possessions in the lives of families in crisis (Sayre 1994), and marginalised communities such as gay men (Kates 2000) and AIDs-afflicted families (Stevenson and Kates 1999; Kates 2001) have also been studied. While the possession of material objects can contribute to one's personal identity, the deprivation of material objects can result in a low level of satisfaction with life. Research suggests that overly materialistic people tend to be less happy because they have unrealistically high expectations of their lifestyles (Sirgy 1998; Ryan and Dziurawiec 2001; Diener and Biswas-Diener 2002).

The pursuit of purchase-related information is another motivation for shopping. Salomon and Koppelman (1992, p. 189) see shopping essentially as an "information-related" activity where individuals seek information to minimise the uncertainties surrounding a potential purchase. Shopping is therefore an information-gathering activity which culminates in an act of purchase. Westbrook and Black (1985) assert that shopping is an exercise of choice optimisation where the consumer tries to establish exactly what he/she wants. In a similar vein, Oshlavsky and Granbois (1979) view shopping as a problem-solving activity. In contrast, Bloch, Sherrell et al (1986; 1989) see shopping as an activity of information acquisition which is ongoing and independent of any impulse or intention to purchase. Consumers are thought to be constantly processing information which may or may not be utilised in their future purchasing decisions.

Shopping also has numerous intangible benefits. Babin, Darden et al (1994, p. 653) developed a scale for measuring the hedonic versus utilitarian value of shopping for the consumer and argued that "not all consumer behaviour is directed toward satisfying some functional, physical or economic need". Indeed, shopping has been recognised as a leisure activity and a form of recreation (Ritchie 1975; Bowlby 1985; Hawes 1987; Jansen-Verbeke 1987; Hawes 1988; Falk 1997). The degree to which a shopping experience can be considered recreational can also vary with the nature of the products

being shopped. Floch (1988) found that consumers tend to stress utilitarian values like convenience when shopping for household and grocery items, but focus on hedonic values like fun when shopping for books, perfumes and fashion.

Bellenger and Korgaonkar profiled the "recreational shopper" as a consumer who enjoys shopping as a leisure time activity (1980, p. 78). Such consumers prioritise a pleasant shopping environment and a wide range of merchandise above convenience. Of course the practical "shopping for" and the recreational "shopping around" are not mutually exclusive as both dimensions will be present in most shopping trips, albeit in different proportions (Falk and Campbell 1997, p. 6). A recreational "shopping around" trip is likely to result in "shopping for" something but a purpose-driven "shopping for" trip is unlikely to have a strong recreational dimension. In recreational shopping, shoppers can enjoy sensory stimulation. Several studies have highlighted the more experiential dimensions of shopping (Holbrook and Hirschman 1982; Bloch and Bruce 1984; Hirschman 1984; Sherry 1990). Falk (1997) argues that the act of browsing and its component activities of looking at merchandise as well as touching them and trying them on also gives pleasure to shoppers. Daydreaming about material acquisitions is yet another form of shopping behaviour which offers stimulation and enjoyment (Caughey 1984; MacInnis and Price 1990; Fournier and Guiry 1993). While consumption-related daydreaming is generally viewed positively, daydreaming about unattainable things can lead to feelings of frustration and low self-esteem (Rhue 1987).

Apart from sensory stimulation, Campbell(cited in Falk, (1997), asserts that shoppers derive pleasure from the autonomy and independence of shopping wherein they can determine where and how they shop. Their self-directed browsing also stimulates their desire for goods which they come across and this arouses pleasure in them. Holbrook and Hirschman argued that another motivation of shopping is the pursuit of novelty (1982). Bianchi (1998) also proposed that consumers tend to seek out novel shopping possibilities which will give them pleasure and bring about efficiency gains. It has also been argued that shoppers derive hedonic value from bargains. The value derived is a function of the difference in the selling price of the item and the shopper's internal reference price (Thaler 1985; Monroe and Chapman 1987). Shoppers gain even

more value from a bargain when they view themselves as being directly responsible for obtaining the bargain. They may have feelings of pride or of having won in a "game" against the seller or other shoppers (Schindler 1998). Westbrook and Black (1985) also observed that shoppers enjoy assuming the role of an economic shopper who obtains maximum value for money in purchasing products which meet their exact requirements.

In a pioneering study on why people shop, Tauber (1972) suggested that shopping also provides consumers with social contact and a diversion from daily routine. Shopping is therefore recognised as an activity which is driven by personal and social motives rather than mere material needs. Shoppers welcome the social contact which they have with other shoppers and retail staff (Tauber 1972; Westbrook and Black 1985). Indeed, even when the act of shopping is mediated by technology, for example in telephone and television shopping, shoppers can also derive social gains. Stephens, Hill and Bergman (1996) studied the parasocial relationships between the US home shopping television channel QVC and its viewers. By greeting television viewers in a warm and intimate manner and by revealing aspects of their personal lives, QVC hosts established parasocial friendships with viewers. It was argued that these parasocial relationships may have encouraged impulse purchases by viewers.

Grant, Guthrie and Ball-Rokeach (1991) proposed a model of media system dependency in the context of home shopping programmes where viewers develop dependency relationships with the medium (television), genre (home shopping programmes) and genre personae (programme hosts) through parasocial interaction. It was postulated that such relationships had an impact on the viewers' programme viewing and purchasing patterns. Skumanich and Kintsfather (1998) further developed this model to include broadcast tele-participation effects, i.e. the extent to which viewers are affected by watching the participation of other viewers who call the shopping programme and have their voices aired over television. While Walther (1996) has argued that the relative failure of current computer shopping venues has been due to the perceived impersonality and the absence of viewer relationship development, recent research suggests otherwise. Henderson, Rickwood and Roberts (1998) studied online electronic supermarket shopping in New Zealand and found that such shopping was not considered by users to

be impersonal but to be very personalised. When the groceries were delivered, a note was always attached identifying the staff who had picked them out, i.e. the grocery picker. Many users began to know their regular grocery picker's name and seemed interested in building a personal relationship with the grocery picker.

With regard to the development of social relationships in mediated shopping, a discernible trend in the marketing of products on the World Wide Web has been the cultivation of virtual communities for advertising and merchandising purposes (Wise 1997). By appealing to the members' sense of community and by collating data about these members, corporations have sought to develop focused marketing strategies targeted at virtual communities. Hagel (1997 pp.18 - 24) argues that the appeal of virtual communities lies in their ability to address the four basic needs of people: interest, relationship, fantasy and transaction. Virtual communities enable people with shared interests but of diverse backgrounds to share experiences with one another. Virtual communities which share information on particular products are thus natural venues for retailers to promote their wares. This feeling of community is unique to online shopping as the Internet enables communication not just between the consumers and the retailers, but between the consumers themselves. It can also involve a large number of disparate people from geographically dispersed areas. The high level of communication amongst virtual community members can foster strong feelings of community. Therefore, it would appear that shopping in cyberspace may have social gains as well.

Extensive research has also been conducted on attitudes towards shopping. Earlier research has identified many different attitudinal shopper types. Stone (1954) identified four types of shoppers: the economic shopper, the personalising shopper, the ethical shopper and the apathetic shopper. Bellenger and Korgaonkar (1980) introduced the classifications of recreational versus economic shoppers. Moschis (1976) identified six shopper types: (1) special shopper, (2) brand-loyal shopper, (3) store-loyal shopper, (4) problem-solving shopper, (5) psychosocialising shopper and (6) name-conscious shopper. Similarly, Lunt and Livingstone (1992) classified shoppers as alternative, routine, leisure, careful and thrifty. Shoppers have also been classified according to their decision-making styles. Claxton, Fry and Portis (1974) used numerical taxonomic analysis to identify

distinct buyer groups based on the consumers' patterns of gathering pre-purchase information: (1) thorough [store intense], (2) thorough [balanced] and (3) non-thorough. Sproles (1985, p.79) argued that most of a consumer's choices are influenced by a decision-making style which is a "patterned, mental, cognitive orientation towards shopping and purchasing". Sproles highlighted six decision-making style traits as key: perfectionism, value consciousness, brand consciousness, novelty-fashion consciousness, shopping avoidance-satisficing style and confused, support-seeking.

While research on shopping tends to focus more on the positive results of shopping, it has been proposed that consumers seek to maximise convenience and to minimise the main costs of shopping – money, time and energy (Kelley 1958; Downs 1961). Shopping can entail substantial financial and emotional costs (Wertz and Greenhut 1985) and these costs result in consumer ambivalence and mixed feelings experienced during shopping (Otnes, Lowrey et al. 1997). Miller (1998) argues that when people shop, they are motivated not by buying things which their significant others covet but by the desire to be in a relationship with their significant others. It is therefore not surprising that findings show that shopping can induce a considerable amount of distress and duress in the shopper (Fischer and Arnold 1990; Sherry 1990; Thompson, Locander et al. 1990; Prus and Dawson 1991; Sherry, McGrath et al. 1993). Shoppers may also experience anxiety in considering risky purchases. When studying shopping actions, it is imperative to be cognizant not just of the gains from shopping but also the costs involved.

1.8.2 Gender differences in shopping behaviour

As seen in the previous section, people's attachment to their material possessions and the way they relate to them varies according to gender. The gender differences between men's and women's shopping habits have also been researched into. Shopping behaviour tends to be influenced by gender roles and gender role attitudes where women and men take responsibility for different household expenses (Sharp and Mott 1956; Wolgast 1958; Fischer and Arnold 1994). For example, while women tend to take responsibility for groceries and kitchen appliances, men tend to deal with bills and insurance. Shopping is also perceived as a female activity, as an extension of the woman's role as a housewife (Lunt and Livingstone 1992). Gender perceptions of

shopping also vary as men see shopping as work and a routine activity while women see shopping more as leisure and an occasional recreational activity (Campbell 1997). Evidence also shows that women constitute a majority of shoppers and spend more time shopping than men do. It has also been noted that even when shopping for the same items, men and women shop differently (Zeithaml 1985).

1.8.3 Impulse buying

Impulse buying is another dimension of consumer behaviour which has received considerable attention. In studies of conventional shopping in American consumers, it has been found that ninety percent of all consumers make impulse buys (Cobb and Hoyer 1986) of which two-fifths of these consumers regard themselves as impulse buyers (Rook and Fisher 1995). Impulse purchases made during conventional shopping have several distinguishing qualities: (i) they involve a sudden and spontaneous desire by the consumer to act, (ii) a state of psychological disequilibrium, (iii) the feeling of psychological conflict, (iv) a diminution in cognitive evaluations and (v) disregard for the consequences of the impulse purchase (Rook and Hoch 1985). They are also characterised by the lack of planning or making elaborate evaluations on the intended purchase on the part of the consumer (Verplanken and Herabadi 2001).

The clinical features of impulse buyers and prescribed medical treatments have been investigated (Taracena and Rada 1998; Hartston and Koran 2002). The personality variables of impulse buyers have also been researched into. Youn and Faber (2000) found that people with a lack of control are more likely to buy on impulse while the association with stress suggests that impulse buying may serve a mood regulating function for some people. The same study also shows that people who are particularly susceptible to environmental stimuli may be more prone to impulse buying. Verplanken and Herabadi (2001) found that impulse buyers tend to have a low personal need for structure, a low need to evaluate, a lack of conscientiousness and a high action-orientation. Kacen and Lee (2002) also assert that the tendency to buy on impulse is influenced by cultural differences. With regard to gender, research has demonstrated that women are more likely to make impulse purchases than men and that women buy different products on impulse than men do (Dittmar, Beattie et al. 1996; Wood 1998). Also, goods which relate

to a person's self image such as jewellery are more likely to be bought on impulse than functional goods such as body care items (Dittmar, Beattie et al. 1996). As for impulse purchases in online shopping, evidence has emerged of recreational online shopping (Li and Russell 2000) which could possibly lead to impulse purchases, as well as the existence of "eBay addicts" (Greenfield 1999). LaRose (2001) has also studied the potential of e-commerce sites to stimulate impulse buying in online shoppers.

1.8.4 Limitations of Existing Consumer Psychology

Before embarking on the study of online shopping actions using the theory of activity and goal-directed action, it is important to address the issue of why existing consumer psychology is inadequate for studying online shopping behaviour. Consumer psychology has always been closely linked to social psychology as many theories from social psychology are used to understand consumer behaviour. However, the theory of activity and goal-directed action has not hitherto been utilised by consumer psychology researchers.

In the study of online shopping behaviour, the application of the theory of activity and goal-directed action can contribute a great deal to consumer psychology for several reasons. First, existing consumer psychology tends to view shopping as a monolithic entity which is guided by a few psychological and attitudinal components, utilising Fishbein and Ajzen's Expectancy-Value approach to explain consumer behaviour (1975). Many research projects study these psychological and attitudinal dimensions in and of themselves, without regard to their relationship to other action dimensions of shopping (Lutz 1977; Palmgreen and Rayburn 1982; Mackenzie, Lutz et al. 1986). The value of such research findings cannot be underestimated. However, it is equally important to analyse the action structures and action-related cognitions of consumers, including experiential components such as emotions and flow. It is only by understanding the action structures of consumers that we can better appreciate the mental processes guiding and executing their actions, as well as the attitudes and external factors influencing them. The theory of activity and goal-directed action enables the researcher to do just that, yet allows the flexibility of incorporating findings from existing consumer psychology.

Second, consumer psychology has been dominated by two contrasting approaches - the information processing model (Howard and N. 1969; Bettman 1979; Bettman, Johnson et al. 1991) and the experiential model (Oshlavsky and Granbois 1979; Hirschman 1986). Both approaches study one dimension of consumer behaviour to the exclusion of the other. As a consequence, the information processing model has been accused of being far too rational and process oriented, overlooking key experiential aspects of shopping such as feelings of enjoyment and fun. On the other hand, the experiential model has been criticised for its inability to predict consumer behaviour. Each of these models has its intrinsic value and the theory of activity and goal-directed action incorporates these two approaches comfortably because it studies both action structures and action-related cognitions. In studying action structure, one is taking the information processing approach. In studying action-related cognitions, one is adopting the experiential approach where action guiding and action accompanying cognitions can be analysed. By bridging these two approaches, the theory of activity and goal-directed action will greatly enhance our understanding of consumer behaviour and contribute to the development of consumer psychology.

1.9 Conclusion

This chapter first discussed the key stages of a typical online shopping transaction – prepurchase determination, purchase consummation and postpurchase interaction – and highlighted the range of options, risks and benefits which the online shopper encounters at each stage. An understanding of the online retail environment enables us to better appreciate the factors impinging on online shoppers' actions. A brief review of psychological action theories was undertaken to explain why the theory of activity and goal-directed action was most appropriate for a study on online shopping actions. A critique of the Expectancy-Value approach was then undertaken. It was argued that the Expectancy-Value approach is unable to accommodate either habitual, self-regulated behaviour or reactive behaviour and that the Expectancy-Value model predominates to the neglect of other behavioural dimensions.

The central tenets of the theory of activity and goal-directed action were discussed in detail, including the hierarchical-sequential structure of goal-directed actions and the

course and sequence of action steps, the hierarchy of organisation processes in goal-directed action, the nature of goal generation, goal enactment and goal protection processes, the role of mental representations, values, attitude processes and social norms in goal-directed action and motivation states including state- and action-orientation and flow. A review of the literature on online shopping was also conducted, focusing on the demographic, personality and lifestyle profiles of online shoppers, motivations for and deterrents against shopping online, the situational factors influencing online shopping behaviour and the features of retail websites.

A review of the literature on conventional shopping, principally findings from consumer psychology, was then conducted to understand the motivations for shopping, including information, recreation and social gains. The financial and emotional costs of shopping were highlighted. Research on gender differences in shopping behaviour and on impulse buying were also briefly reviewed. The limitations of existing consumer psychology for the in-depth study of online shopping actions were then explained. Namely, existing consumer psychology tends to view shopping as a monolithic entity which is guided by a few psychological and attitudinal components, overlooking the action structures and action-related cognitions of consumers. Existing consumer psychology tends to adopt either the information processing or the experiential approach, without incorporating both of these equally important dimensions of consumer actions. The chapter then concluded with a phenomenology of online shopping to illustrate how the theory of activity and goal-directed action can be applied to an analysis of online shopping actions and the benefits of applying this theory.

In the next chapter, the US e-commerce retail climate will be described, along with a socio-economic profile of typical Internet users and online shoppers. The methodology adopted for the qualitative analysis of online shopping actions will also be explained and explicated.

PART II – QUALITATIVE ANALYSIS OF ONLINE SHOPPING ACTIONS

2 BACKGROUND AND METHODOLOGY

This chapter begins with a description of the US e-commerce retail climate, to set the backdrop against which the research was conducted. This is followed by an explanation of how the qualitative study of online shopping actions was conducted. The interviewee recruitment process for the qualitative study will also be explained. The procedures and data analysis schemes for the each research method used in the qualitative study will be described in detail. The chapter then concludes with an assessment of the efficacy of the methods used.

2.1 THE E-COMMERCE RETAIL CLIMATE

Business-to-consumer e-commerce is conducted predominantly through Internet online retail stores which appear in a large variety of formats. Researchers have attempted to classify these stores into meaningful categories. Hoffman, Novak and Chatterjee (1995) conceived of three categories of online retail stores based on their broad functional purposes: (i) online store-fronts or catalogues selling products and raising store profile, (ii) content sites providing information and customer support, (iii) web portals with links to groups of stores such as online malls and search engines. In a more recent study, Spiller and Lohse (1998) conducted an empirical analysis of a sample of online retail stores and generated the following classifications: (i) superstore: a large online catalogue with navigational tools, search facilities and value-added features such as feedback channels or special promotions; (ii) promotional store: a store offering a limited product range but extensive company information and value-added features; (iii) plain sales catalogue: a medium to large online catalogue with large images and no value-added features; (iv) one-page catalogue: a small-scale catalogue with a product-browse function; and (v) product listing: a medium-sized catalogue with product listings and small product images.

The e-commerce climate changes rapidly due to constant technological advancements, and the transience of the medium makes it easy for online stores to add or remove features from their websites. Hence it is difficult to attain a wholly comprehensive and encompassing classification of online store genres. Suffice it to say that online retail stores exist in a variety of formats and that the most prevalent

form is that of a store which has online product information, transaction facilities and after-sales service channels.

2.1.1 Internet and online shopping adoption in the US

The US population is one of the most "wired" populations in the world with rising Internet usage and e-commerce sales figures. The US has the highest number of Internet users in any country with an estimated 153.84 million users as of November 2000 (Nielsen Ratings 2001). Per capita, Internet adoption in the US is second in the world with 55.83 per cent of the population online as opposed to Sweden, which is first with 56.36 per cent of the population online (Nielsen Ratings 2001; Nielsen Ratings 2001). A demographic profile of the US' daily Internet population is reported in Table 2.1:

Table 2.1 US Daily Internet and Specific Population Groups

On an average day, 46 million Americans are online. Here is a portrait of wired America on a typical day	Percentage of Internet users in this group who are online each day	Number of Americans who are daily users (in millions)
SEX		
Men	55	25
Women	49	22
RACE		
Whites	54	42
Blacks	37	3
Hispanic Origin*		
Non-Hispanic	52	42
Hispanic	50	4
AGE		
18-29	49	12
30-49	52	23
50-64	55	8
65+	64	2
EDUCATION		
Less than high school	37	2
High school graduate	44	10
Some college	53	14
College degree plus	60	20

Source: Pew Internet and American Life Project, May – June 2000 Poll

** This table follows the practice of the American Census Bureau in presenting data on the Hispanic population which distinguishes between ethnic and racial classifications.*

With regard to online shopping specifically, it is projected that the number of US Internet users buying goods and services over the Web will more than triple from 18.6 million in 1998 to 64.6 million in 2002 (IDC 2000). It is estimated that 80 per cent of Internet users in the US have made an online shopping transaction since they started using the Internet (eMarketer.com 2001). On an average day, 55 million Americans are online, of whom 14 per cent conduct research on a product or service and 4 per cent buy a product (Pew Internet and American Life Project 2000, p. 10).

The largest group of online purchasers are people in their thirties and forties, of whom 53 per cent are 30 to 49 years old and 29 per cent are 18 to 29 years old (Pew Internet and American Life Project 2000, p. 33). 40 per cent of online purchasers have a college degree and 30 per cent have an annual family income of US75,000 dollars (Pew Internet and American Life Project 2000). Women constitute more than half of the country's online shoppers with 58 per cent of them being female as opposed to 42 per cent being male (eMarketer.com 2001):

Figure 2.1 Gender distribution of US online shoppers

In addition, one quarter of the online shopping population in the US accounts for three quarters of all online purchases (eMarketer.com 2001).

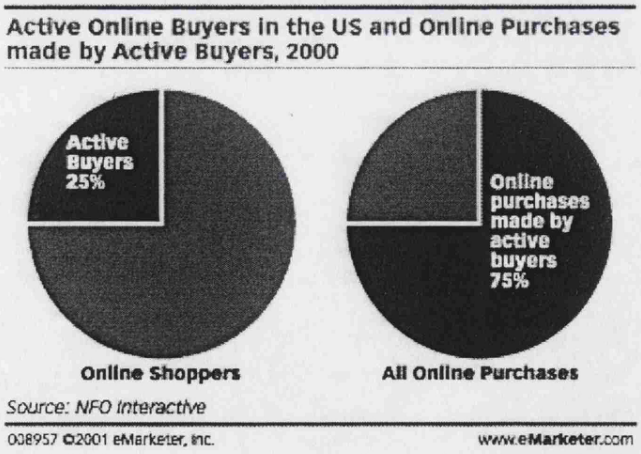


Figure 2.2 Percentage of online purchases made by active online buyers

The top categories for goods which consumers have purchased online are reported in Table 2.2 (ACNielsen 2000).

Table 2.2 Top product and service categories purchased online

Product category	% of consumers surveyed who have purchased this product online
Books	42
CDs/DVDs/Videos	38
Other	37
Computer Software	29
Travel-related	28
Clothing/Apparel	27
Specialty Gift Items	24
Computer Hardware	18
Entertainment Services	17
Houseware Items	16
Grocery or Drug	13

Source: ACNielsen Report on eShopping Preferences for Nearly Half the Country, 2000

2.2 Qualitative, In-Depth Study of Online Shopping Actions

Hitherto, research on online shoppers has adopted a predominantly quantitative approach, using data mining methods to identify how long it takes for an online shopper to buy a product after he/she has clicked on it etc (Sen, Padmanabhan et al. 1998). However, online shoppers do not always carry out their shopping in a logical, pre-determined way. They are free to jump from hyperlink to hyperlink as a result of the multi-faceted, multi-linked nature of the World Wide Web. The mere calculation of the average time taken for the online shopper to place an online order is not going to reveal much about his/her shopping behaviour, attitudes and action strategies. Instead, a qualitative approach needs to be adopted to uncover the action structure of the typical online shopping acts.

In order to understand action structure, Clarke suggests that an "intensive" method to understand large numbers of factors in small numbers of instances is preferable to an "extensive" method of understanding small numbers of factors in large numbers of instances (Clarke 1982, pp. 201-202). The objective will be to carefully analyse small numbers of examples for any recurring events, patterns, processes and relations (Clarke 1982). Cranach adds that the methods chosen to study goal-directed action should meet several criteria (1982, pp. 51-53). Principally, the situations which are studied should be 'real' in that they exist in reality and 'natural' in that they should be situations which are part of the everyday life of the interviewee.

These two qualities should be maintained because the full extent of goal-directed behaviour and cognitions come into play only in real situations. As such, the study of human actions is not suited to experimental methods (Clarke 1982). Instead, a more naturalistic research method has to be found.

Cranach and Kalbermatten (1982, p. 121) recommend several methods for the in-depth study of ordinary, goal-directed, everyday actions like shopping and going to the movies: (i) systematic observation, (ii) self-confrontation interviews, (iii) 'thinking aloud' and (iv) the interruption method (Cranach 1982, pp. 68-69). The first method listed, systematic observation, is for the objective observation of actions and is especially useful for analysing detailed action steps. The latter three methods are used for uncovering the action-related cognitions which people have when performing certain acts. Let us assess the suitability of each of these three methods for the purposes of this thesis. In self-confrontation, the interviewee's actions are video-recorded and while the recording is played back to him/her, the interviewee explains his/her actions. In contrast, 'thinking aloud' demands that the interviewee reports continuously on his/her ongoing conscious cognitions while he/she performs the action. The interruption method on the other hand, involves interrupting the interviewee during his/her actions to ask him/her to report his/her cognitions.

Self-confrontation was selected over the 'thinking aloud' and interruption methods for the following reasons. 'Thinking aloud' has been known to interfere with the action-related cognitions and the structure of thought processes of the prevailing task (Ericsson and Simon 1984). The interruption method on its part, interferes with the flow of action-related cognitions and the flow of the activity itself (Cranach 1982, pp. 68-69; Ravden and Johnson 1989). Therefore, self-confrontation was used to elicit action-related cognitions while systematic observation was used to chart the action steps of the interviewees. Other aspects of online shopping had to be investigated using other methods. To study the social psychological dimensions of online shopping such as flow, feelings of community, trust and loyalty, the interviewees were asked a series of questions in a semi-structured interview. To assess whether interviewees were state or action-oriented, a questionnaire was used. The questionnaire was also used to query the interviewees on their socio-economic profiles such as income, marital status and educational achievement.

In summary, this thesis utilised a triangulation of several methods for the qualitative study of online shopping acts (Denzin 1978; Brewer and Hunter 1989; Patton 1990) – (i) self-confrontation interview, (ii) systematic observation, (iii) semi-structured interview and (iv) self-administered questionnaire. The key advantage of triangulation is that biases inherent in a particular method will be neutralised when used in tandem with other methods (Jick 1979). These four methods, applied together, helped to provide a multi-faceted and holistic picture of online shopping actions and the cognitive processes which guide them. These methods were first piloted on five individuals to test their efficacy. Refinements to these methods were then made based on the pilot trial findings. Table 2.3 is a summary of these methods and the research objectives which they help to meet is below.

Table 2.3 Summary of methods and research objectives

Method	Research Objectives
Self-confrontation interview Involves recording an interviewee's actions while he/she shops online and playing the recording back to him/her as he/she recounts his/her thoughts during his/her actions.	▪ Uncovering interviewees' cognitive processes during online shopping actions ▪ Correlating the cognitive processes with respective action steps ▪ Deciphering action strategies of the interviewees ▪ Identifying attitudes, values and norms which guide actors' online shopping actions ▪ Understanding the nature of self-regulatory processes in online shopping actions ▪ Noting the presence or absence of feedback processes
Systematic observation Involves recording an interviewee's actions while he/she shops online. Subsequently, the recording is analysed to map out the interviewees' detailed action steps	▪ Charting the action steps and action strategies of online shopping actions
Semi-structured interview Involves asking the interviewee a series of open-ended questions about various aspects of online shopping	▪ Comprehending the interviewees' motivations for shopping online ▪ Identifying attitudes, values and norms which guide actors' online shopping actions ▪ Obtaining a deeper understanding of the flow experience in online shopping
Self-administered questionnaire Involves asking the interviewee to answer a series of questions pertaining to themselves and their experience of online shopping	▪ Classifying actors according to a state or action orientation ▪ Querying interviewees on personal socio-economic information such as income and educational achievement

2.3 SELF-CONFRONTATION INTERVIEW

The self-confrontation interview was adopted for this thesis for several reasons. First, it facilitates the "integration of cognitive with manifest phenomena, of verbal with non-verbal activities (Kalbermatten 1982-83, p. 3). Second, the starting point for any systematic analysis of human-computer interaction is a concrete

understanding of how and why users perform their activities (Smith 1997). These can be discovered through the self-confrontation interview. Third, it taps into the short-term memory of the individual which is more likely to be reported in full than long-term memory (Ericsson and Simon 1984). Fourth, interviews are also more effective in investigating experiences and feelings when compared to more static methods such as questionnaires (Judd, Smith et al. 1991; May 1997; Denscombe 1998). Finally, interviews are useful for analysing actions because the actors' intentions can be understood from the actors' own claims and it is unlikely for actors to be systematically false about their intentions (Harre and Secord 1972; Harré 1982).

The field of human-computer interaction has successfully utilised interviews to link computer users' expectations and intentions to their actions (Suchman 1987; Douglas 1995). Similarly, the field of consumer research has applied the method of obtaining anticipatory, contemporaneous and/or retrospective protocol statements from consumers to understand the act-action structure of consumer actions (O'Shaughnessy 1987, p. 51). However, the self-confrontation interview has yet to be applied to the study of either online actions or shopping actions.

2.3.1 Procedure

In the self-confrontation interview, the interviewees were asked if there was anything which they needed to shop online for and if so, to shop online in their customary manner while their actions were recorded. To further naturalise the situation, interviewees were told that they could take as much time as they needed. They were also told that they did not have to confine themselves to the items which they said they would shop for but could go to whichever websites came to mind and to shop for any products which occurred to them. It was especially important to highlight this point as it would make the interview session approximate regular online shopping more closely where shoppers do not necessarily shop only for what they need. The interviewees were left to shop online independently, without interference by the researcher, to eradicate any effects which observation may have had on their actions (Martin and Bateson 1993). The Web navigation software used was Internet Explorer Version 5.0.

Since this thesis focuses on online shopping actions, the video recordings did not focus on the interviewees physically but on the interviewee's interactions with the computer interface. The interviewees' on-screen actions were video-recorded using screen capture software Camtasia™. Camtasia™ is able to record all of the activities that occur on a computer screen. It can therefore capture how an interviewee arrives at a particular website, which parts of the website he/she clicks on, the products he/she views, the information he/she keys in and so on. The on-screen activity is then saved as a video-recording. (The workings of Camtasia™ will be described in greater detail in Section 2.4.1).

When the interviewees had completed their online shopping, the video recordings were played back to them. The recordings were paused at critical junctures to elicit comments from the interviewees about their actions at the time. Although Cranach (1982) stipulated that the recordings have to be paused at fixed time intervals, this rule was not applied in the study. This was due to the fact that online actions occur in very small time windows and in irregular rhythms. Pausing the recordings at a fixed time interval that was too large would have resulted in loss of detail. On the other hand, having a fixed time interval that was too small would have been extremely disruptive to both the interview process and the interviewee's recollections due to the constant interruptions.

Instead, the recordings were paused whenever activity was occurring, for example when something new appeared on the screen or when there was cursor movement, but not in instances where the screen remained static such as when a website was loading and so on. The possibility that the interviewees had action-related cognitions even when the screen was static could not be ruled out. Therefore, as an additional safeguard, the interviewees were instructed to tell me to stop the recording if they had an action-related cognition to recount or something to explain to me.

The interviewees were asked to recount any cognitive processes - thoughts, feelings, intentions, values, attitudes and any other mental processes - which may have guided their online shopping actions. The self-confrontation interview is supposed to be extremely rigorous and structured where the interviewees should only

be allowed to recount their action-related cognitions and nothing else (Cranach and Kalbermatten 1982; Kalbermatten 1982-83). However, this is perhaps an ideal to be striven for rather than a practical guideline.

Most of the interviewees would recount their cognitions and comment on their actions at the same time. Often, their comments on their own actions revealed interesting dimensions of their actions as well. The pilot interviews showed that stopping the interviewees mid-sentence and exhorting them to focus only on their action-related cognitions made them uncomfortable and uncertain of what to say. Their train of thought was disrupted and this resulted in reticence. Therefore, for the actual interviews, the interviewees were instructed to recount their action-related cognitions but were not stopped when they digressed. The interviews were tape-recorded and full transcripts of the interviews were prepared. The action-related cognitions were then identified and correlated with their respective actions in a separate table.

To ensure that the cognitions and actions were accurately correlated, all transcripts were made within 24 hours of the interviews being conducted. A foolproof method of correlating the actions with the cognitions would have been to have a video-recording capturing both the interviewee and the computer screen as he/she commented on the recording of his/her on-screen activity. However, this is extremely costly and time-consuming. Very often, from reading the transcripts alone, it is very clear which part of the on-screen recording the interviewee is referring to. The added benefit which will be gained from having an additional recording of the interviewee and the computer screen is minimal. The self-confrontation interview guide is in Table 2.4.

Table 2.4 Self-confrontation interview guide

Before the interviewees are asked to shop online (warm up questions):

- Let's chat a little about your online shopping.
- Which products or services do you shop online for?
- Have you ever bought anything online?
- Are there any purchases that you make regularly online, e.g. do you buy your weekly groceries online?
- How much of your total shopping needs would you say are met by online shopping?

Interviewees are asked to shop online while their on-screen actions are recorded:

- Is there something which you have been planning to shop online for? Try to shop online for that product/service in the manner that you usually shop. Take as much time as you need.

After the interviewees have shopped online (self-confrontation interview)

- I'm now going to play back the recording of your online shopping to you. I will pause the tape now and then to ask you what thoughts you had at that point. If there were no thoughts at any moment, that is perfectly fine. If you need me to stop the tape so that you can explain something to me or to show me something, let me know.
- Could you also point out what you would do differently on your own computer, e.g. would you access this website from a favourites list instead of keying in the URL etc.?

The recording will be stopped at certain junctures to elicit comments from the interviewee using the following prompts:

- Did any thoughts occur to you at this point?
- Why did you choose to click on this link?
- Why did you leave this site?
- Which part of the website were you looking at at this point?
- This appears to be the first thing you looked at. Why?

Concluding questions

- Now that you have observed your own actions when you shop online, can you tell me how your online shopping style differs from your regular shopping style?
- And do the two shopping styles have anything in common?

2.3.2 Post pilot-trial refinements

Based on the pilot trials of the qualitative, in-depth study of online shopping actions, several refinements were made to the self-confrontation interview method.

2.3.2.1 Rejecting the episodic, self-confrontation interview method

In the pilot interviews, an episodic, self-confrontation interview method was used. The intention was to get the interviewees to re-enact online shopping experiences from memory so that the situations studied were real and natural as espoused by Cranach. However, serious problems arose with the interviewees' powers of recall especially with regard to prior purchases they had made. While the interviewees could remember broad notions such as their motivations for using online shopping for that particular purchase, they could not always remember the exact steps in which they had navigated the World Wide Web. Two of the interviewees could only recall their exact steps during the self-confrontation interview, after they had performed the re-enactment. In one case, this was compounded by the fact that the website concerned had already changed in appearance in the time between the interviewee's purchase and the interview. This problem of poor recall was caused by the fact that the period of time between the interviewee's purchase and the interview was too long.

As a result, the episodic interview method was abandoned for the actual studies. Instead, the interviewees were asked to shop online for whatever they liked and to surf any websites which came to mind. This helped to guard against poor recall by the interviewees as well as the transience of websites. The episodic interview approach was however adapted for the semi-structured interview where they were asked to recall particular episodes of online shopping which had brought them joy and happiness in an effort to understand their flow experience.

2.3.2.2 Modifying the self-confrontation interview method

The self-confrontation method was not adopted wholesale as stipulated by Cranach. Some adaptations had to be made so that it was better suited to studying online shopping behaviour. It was modified in light of the fact that the computer user's focus of attention, i.e. what he/she is looking at on the computer screen is not always apparent to

the naked eye. So while the interviewees were asked to recount their thoughts, they were also prompted now and then with questions regarding what they were looking at on the computer screen. In addition, the aim of this thesis was to gain an insight into the typical online shopping actions, so the interviewees were occasionally asked whether the actions which they had performed were typical of their customary online shopping behaviour.

2.3.2.3 Enhancing the clarity of questions

Refinements to the interview questions were made in light of the pilot trial findings. In the first interview, the question used to elicit action-related cognitions was misinterpreted by the interviewee as an invitation to comment on the design of the interface. This question was thus reformulated to make it clearer and more specific for later interviews. In the actual interviews, the interviewees were reminded that they should focus mainly on their action-related cognitions but were not stopped when they digressed so as not to disrupt the flow of the interview.

2.3.2.4 Choice of interview setting

Another refinement which was made pertained to the interview setting. For the pilot trials, the interviews were conducted in my home. This failed to capture the natural environment and conditions in which the interviewees' online shopping usually takes place. The interviews should ideally be conducted in the interviewees' homes or workplaces in order to capture their usual online shopping environments. However most interviewees were uncomfortable with such an arrangement, especially those who usually shop online in their workplaces. In fact, most of them preferred to be interviewed either in my home or in a neutral location. To overcome this problem, the interviewees were asked to describe the typical environments in which they shopped online. They were also queried on whether they engaged in other activities at the same time and whether they shopped independently or in the company of family and friends.

2.3.3 Data Analysis

A self-confrontation interview on a fifteen minute online shopping act lasts an average of one hour and generates ten pages of interview transcript. (The transcripts were

prepared on Microsoft Word software.) Care was taken to ensure that the cognitions which were studied were indeed action-related cognitions. One had to distinguish between cognitions which had occurred during the recording and post-interview reflections which had occurred to the interviewees only when they were viewing the recordings. There was also a need to separate commentary on action from action-related cognitions. Nonetheless, the interviewees' commentaries on their actions also shed light on the nature of online shopping actions and were retained in the original Microsoft Word file for analysis along with the semi-structured interview transcripts. From the transcripts, the action-related cognitions were identified and isolated, and correlated with their respective actions in a separate table.

2.4 SYSTEMATIC OBSERVATION

Systematic observation is defined as "a particular approach to quantifying behaviour...The aim is to define beforehand various forms of behaviour – behavioural codes – and then ask observers to record whenever behaviour corresponding to the predefined codes occurs" (Bakeman and Gottman 1986, p. 4). Online shopping is a form of human-computer interaction which is extremely rapid and compressed in time. Online shoppers are able to view a large number of products, process vast amounts of information and perceive a wide range of stimuli from websites in comparatively short durations. Systematic observation of behaviour which is too fast or complex to analyse in real time can be enhanced by the use of video recordings which can subsequently be slowed down for analysis (Martin and Bateson 1993).

The systematic observation method was selected for several reasons. First, while interviews may be useful for understanding the cognitive processes underlying certain acts, the action steps constituting the acts need to be identified through systematic observation. Second, systematic observation enables the researcher to record behaviour as it occurs and not as reported by the actors (Selltiz, Jahoda et al. 1959; Chadwick, Bahr et al. 1984). Observational methods have been adopted by researchers to study human-computer interaction in detail, charting how users navigate websites, at which points they encounter problems and to uncover the thoughts which accompany the computer users' actions (Abrams 2000).

2.4.1 Procedure

Recordings of the interviewees' interactions with e-commerce interfaces were observed to discern the interviewees' action steps and action strategy. Camtasia™, a screen capture software, was utilised for recording the interviewees' interactions with Internet interfaces.[1] Camtasia™ is capable of recording all of the activities that take place on a computer screen – cursor movements, text inputs, screen changes, audio and video output by the Internet etc. Therefore, it is able to capture how an interviewee arrives at a particular website, which parts of the website he/she clicks on, the products he/she views, the information he/she keys in and so on. In the recordings, the interviewees' cursor movements are highlighted in a yellow sphere to enhance visibility. A red circle appears around the yellow sphere to indicate that the interviewee has clicked on the mouse button. The on-screen activity is saved as a video-recording in an AVI file format. AVI stands for Audio Video Interleave and is the most common format for recording audio and video data on the personal computer (McGowan 2000).

Since recordings were made only of the interviewees' on-screen activity, no records were made of the facial expressions and body movements of the interviewees. These were however of secondary importance as pilot trials revealed that online shoppers do not display many facial expressions or variations in body movements when they focus on the computer screen. Furthermore, the interviewees recounted their thoughts and feelings verbally without my having to infer such information by observing their physical movements and expressions.

2.4.2 Data analysis

Before commencing the analysis of observational data, it is useful to construct a coding scheme to classify the component actions of the behaviour being studied (Bakeman and Gottman 1986). The codes should be "mutually exclusive" so that only one code is associated with a particular event and they should also be "exhaustive" such that there are codes for every event (Bakeman and Gottman 1986, p. 33). Given that the

[1] Camtasia can capture all moving action on the computer screen and save it as a computer movie file. It is produced by the TechSmith Corporation. It costs around US$150 and can be purchased and downloaded from the TechSmith corporation website. Further information on Camtasia, as well as an evaluation version of the software are available at http://www.techsmith.com/.

goal of the thesis was to identify the sequence of action steps in online shopping acts, it was more meaningful to code events rather than to code time intervals between events (Bakeman and Gottman 1986).

To analyse the video-recordings, a coding scheme was first constructed to identify the different actions performed by the interviewees while they shopped online, e.g. type in URL, click on product hyperlink, etc. Thereafter, this coding scheme was used to record the occurrence and sequence of codeable events. The coding frame is presented in Table 2.5. Care had to be taken to create appropriate terminology for describing different online shopping actions and the different features which appear on online shopping websites. When the hyperlink appears in the form of underlined text, it is coded as a link. When the link is in the form of a graphic representation such as a button or icon, it is coded as a "button".

Table 2.5 Coding frame for systematic observation of online shopping actions

Keys website URL directly into browser address box
Keys search string into search engine box
Amends search string in search engine box
Studies information on search engine search results page
Clicks on hyperlink/button in search engine results page
Studies information on retail site
Keys search string into retail site search engine
Clicks on hyperlink/button in retail site
Clicks on image in retail site
Clicks on hyperlink/button in non-retail, third-party site (e.g. news portal site)
Clicks on online advertisement
Studies information in pop-up window
Closes pop-up window
Leaves website
Opens additional Internet browser window

2.5 SEMI-STRUCTURED INTERVIEW

After the self-confrontation interview, a semi-structured interview was conducted to obtain the interviewees' opinions on aspects of online shopping which had not been covered in the self-confrontation interview. The key advantage of the semi-structured interview method is that it allows the interviewer to be flexible in asking questions and in developing issues which the researcher wishes to explore in greater detail (Judd, Smith et al. 1991; Denscombe 1998).

To study the phenomena of flow and impulse purchases, the semi-structured interview also incorporated elements of the episodic interview method. The episodic interview assumes that an individual's experiences of a certain realm are retained in his/her memory as narrative-episodic knowledge which is related to specific contexts and situations (Flick 1998). It is therefore directed at situations in which the interviewee has had experiences germane to the research question. Interviewees are asked to recount specific episodes from their lives relating to a particular issue (Flick 1998). The narrative obtained from the interviewee is practical and experiential, rather than abstract and conceptual.

2.5.1 Procedure

During the semi-structured interview, interviewees were asked to reflect on their experience of online shopping when answering the questions. They were queried on aspects such as multi-tasking, the nature of interactive actions which they performed while they shopped online, the typical environments and conditions in which they shopped online, the opinions which their family and friends had of their online shopping, their attitudes towards online shopping and shopping in general, as well as aspects like store loyalty, online communities and trust. Interviewees who had particular experiences in online shopping, e.g. participation in an online community, were probed deeper on these experiences. The semi-structured interview guide is in Table 2.6.

In addition, interviewees who had made online impulse purchases or who had experienced flow in online shopping were asked to recount these episodes. To further investigate flow, all the interviewees were shown a series of five statements relating to flow and asked for their responses to these statements. Examples of these statements included, "Shopping online helps me forget about the day's problems" and "I get so involved when I shop online that I forget everything else". These statements proved to be very useful in eliciting elaborate responses from the interviewees with respect to their style of shopping online. The interviews were tape-recorded and transcripts of these interviews were prepared using Microsoft Word software.

Table 2.6 Semi-structured interview guide

I would like to ask you some general questions about your online shopping activities. Please remember that there are no right or wrong answers. Just think of your personal experience of online shopping when you answer these questions.

- How do you usually go about starting an online shopping "trip"? Do you start surfing the Internet with the express purpose of shopping, or is it an incidental, by-the-way thing as you are doing other things on the Internet?
- And do you start shopping with something rather specific in mind?
- When you start shopping online, do you usually end up buying what you originally set out to buy?
- How do you feel about shopping in general?
- How do you feel about online shopping in general?
- Which factors usually influence your decision to shop for something online? Can you describe a typical situation?
- When you buy something online, does the fact that you do not have to physically take money or credit cards from your pocketbook affect your purchase in any way? Do you usually you end up spending more or less online?
- How do you usually decide which websites/online stores to shop at? (Prompts: for example, search engine, friends' recommendations, email alerts, TV, radio advertisements etc.)
- Which sources of online information do you use to guide your online shopping? (Prompts: for example, search engines, comparison shoppers etc.)
- Which sources of offline information do you use to guide your online shopping? (Prompts: for example, newspapers, magazines, television advertisements etc.)
- Do you consult anyone before making your online purchases?
- Do you communicate with other consumers via email, chat rooms or discussion groups?
- Have you ever contacted the customer service department of any online retailers with a query or problem?
- How do you contact them? Via email, bulletin boards, real-time chat or by telephone?
- Are you part of any online communities? Tell me about your experience of this online community.
- How would you feel if online shopping suddenly ceases to exist? Would that make a difference in your life? If so, how?
- Is online shopping something you do independently or with friends and family?
- Do you engage in other online activities while you shop online, e.g. check email, chat online, work on a word-processing document etc. ?
- Do your friends or family think that shopping online is cool?
- Can you recall any online shopping experience in which you felt happy, excited or high-spirited while shopping online?
- Could you describe that experience for me?
- Does any aspect of online shopping give you joy or lifts your spirits?
- Do you look forward to shopping online?
- To what extent do you agree or disagree with the following statements?
    - *Shopping online helps me forget about the day's problems.*
    - *I get so involved when I shop online that I forget everything else.*
    - *I daydream about the products and services which I come across when I shop online.*
    - *Shopping online isn't just about buying things – I find it entertaining.*
    - *Online shopping picks me up.*
    - *I shop online for the pure enjoyment of it.*
- Let's talk a little bit about your Internet usage habits. How long have you been using the Internet for?
- Would you say that you are comfortable with using the Internet?
- How many hours a day do you spend surfing the Internet?
- How much of this time is spent on online shopping?
- Do you usually access the Internet from work, school or home?
- Could you describe for me the typical environment in which you shop online?

2.5.2 Post pilot-trial refinements

In the pilot trial interviews, flow was investigated using a self-administered questionnaire which included items adapted from GVU's *Purchasing on the Internet Questionnaire* (1998). However, this method was rejected for the actual study because it did not facilitate an in-depth understanding of flow. Respondents who had experienced flow were unable to elaborate on the nature and extent of their flow experience. Indeed, the concept of flow includes feelings of fantasy and daydreaming. These are thought to be subconscious phenomena which need to be retrieved through the use of indirect

methods and projective techniques (Holbrook and Hirschman 1982). In light of this, it was decided that flow would be better explored through the semi-structured interview.

2.5.3 Data analysis

Transcripts of the self-confrontation and semi-structured interviews were content analysed together using a method known as "meaning condensation". This method abridges the interviewees' views into briefer statements or labels (Kvale 1996). Two sets of labels were generated, one set relating to action structure and the other pertaining to general qualitative aspects of online shopping. The qualitative analysis software NUDiST was initially employed but found to be unsuitable for the multi-faceted nature of the data which dealt with both online shopping action structures and the qualitative aspects of online shopping.

A customised data analysis method had to be applied instead. The analysis was performed manually on print-outs of the transcripts where labels relating to action structure were listed in the left margin and labels pertaining to general qualitative aspects in the right margin. This made it possible for some views to have two sets of labels concurrently if the views pertained to both action structures and social-psychological aspects of online shopping. When any ideas or phenomena reappeared, the labels were re-attached. New ideas were given their own labels. This method enabled me to organise the data under a few salient issues and to study any inter-relations between the different ideas and phenomena. The coding frame for the interviews is in Table 2.7.

Table 2.7 Coding frame for interview data

Structural dimensions
Hierarchical-sequential structure (presence/absence)
Multi-tasking online (presence/absence)
Multi-tasking offline (presence/absence)
Nature of online shopping (intentional/incidental)
Cognitive processes
Automatic actions (presence/absence)
Interactive actions (presence/absence)
Goal (fixed/varying)
Dispositions
Mental Representations
Knowledge (general/specific)
Memory processes
Scripts
Values
Attitude to shopping in general (positive/neutral/negative)
Attitude to online shopping (positive/neutral/negative)
Attitude to conventional shopping (positive/neutral/negative)
Social norms (positive/neutral/negative)
Motivation states
State-orientation
Action-orientation
Flow (positive/neutral/negative)
Emotions (positive/neutral/negative)
Situational variables
Structure of World Wide Web
Interface design
Interactivity
Social psychological dimensions
Online shopping (advantages/disadvantages)
Conventional shopping (advantages/disadvantages)
Effect of offline shopping on online shopping
Effect of online shopping on offline shopping
Online communities (positive/neutral/negative)
Store loyalty (positive/neutral/negative)
Price thresholds (increased/no change/decreased)
Impulse purchases (absence/presence)
Social perceptions (positive/neutral/negative)
Information sources on online shopping (online/offline)
Online shopping environment (pleasant/unpleasant)

2.6 SELF-ADMINISTERED QUESTIONNAIRE

Following the semi-structured interview, interviewees were also asked to fill out a short self-administered questionnaire which would assess whether they were state- or action-oriented individuals. These subconscious aspects of goal-directed action are best assessed using indirect methods such as questionnaires, instead of face-to-face methods such as interviews (Babin and Darden 1995).

2.6.1 Procedure

The concept of state- and action-orientation has been applied to the study of consumers before. Babin (1995) had adapted Kuhl's (1986) action-control orientation survey to study consumer self-regulation in a retail environment. Babin's adaptation was therefore used in the self-administered questionnaire. Each item comprised a preceding phrase (relating to shopping and other everyday activities) and two alternative phrases to complete the preceding phrase, with one alternative indicating a state-oriented response and the other indicating an action-oriented response. Responses to action-oriented responses scored one point each while responses to state-oriented responses scored no points.

The questionnaire also queried the interviewees on their socio-economic profiles such as their educational status, income bracket, age and marital status. These details were obtained through the questionnaire so that the interviewees would not feel awkward about revealing their personal details orally. The questionnaire was administered only *after* the interview so that the questionnaire contents would not affect the interviewees' answers to the interview questions (Flick 1998). A copy of the self-administered questionnaire is at Appendix 2.

2.6.2 Data analysis

The questionnaire results were then used to classify interviewees according to state- or action-orientation. The sums of their scores were calculated and a median split was used to classify the interviewees so the scale was relative rather than absolute (Kuhl 1985).

2.7 INTERVIEWEE RECRUITMENT

This part of the empirical research was targeted at collecting different types of online shopping actions. Hence a corpus construction approach was adopted for recruiting interviewees, where subject selection proceeds stepwise and the diversity of the subjects' social strata and functions is striven for (Bauer and Aarts 2000). Snowball or chain sampling was used where the interviewees who were first studied were asked to

recommend other individuals who fit certain specific socio-economic profiles and had varying degrees of experience with online shopping and Internet use.

2.7.1 Procedure

The first group of interviewees were recruited through a campus newspaper advertisement and through emails to targeted communities in New Haven. These communities were selected on the basis that the residents in these neighbourhoods were seen disposing of delivery boxes from online stores in their recycling bins. This was a good indicator that many of these residents patronised online stores and had experience with online shopping. From these initial contacts, six interviewees were obtained. From there, snowball sampling was adopted where the initial six interviewees were asked to help recruit friends and acquaintances whom the interviewees knew had experience in online shopping and who fit certain specific socio-economic profiles stipulated by me. This resulted in the recruitment of another five interviewees.

The remaining three interviewees were then specially selected through personal contacts to fit socio-economic profiles which differed from those online shoppers who had already been interviewed. Equal numbers of male and female interviewees were recruited to account for any gender differences in online shopping behaviour. Fourteen interviewees were studied in total – seven male and seven female. Summaries of the socio-economic profiles of the interviewees and their experience with the Internet and online shopping is at Appendix 2.

The interviews were conducted between April and June 2001. The venue for the interviews was either the interviewees' homes, offices, my own home or a neutral location and was selected by the interviewee. Most of the interviewees chose to be interviewed in my home. For their efforts, the interviewees were each given a US$10 shopping voucher. At the end of the interview, every interviewee was asked to sign a release form agreeing to have his/her views used by me in any publication or transmission medium. A copy of the release form is included in Table 2.8.

Table 2.8 Interviewee release form

I agree to be present at an interview that will be audio- and video-taped. It is understood that ideas, suggestions or material may be furnished by me or others at such a gathering. These may be original or may be similar to ideas, suggestions or material already in your possession which previously may have been considered by you. In any event, I give, grant and transfer to you without additional consideration all rights of any ideas, suggestions or material furnished by me for use by you as you see fit, without restrictions.

I understand that you may use the results of the interview or gathering for your own purposes, and I hereby release and discharge you from any claims, obligations, and liability of whatever kind of nature with respect to matters herein contained.

It is however agreed that my name will never be used in any broadcast or publication medium without my permission.

Name _____
Address _____
City _____
State _____
Zip _____
Signed _____
Date _____

2.8 VALIDITY

Gaskell and Bauer (2000) assert that in qualitative research, transparency is functionally analogous to internal and external validity in quantitative research. In this regard, this chapter has described in detail the design and administration of the qualitative research methods adopted in this thesis. Details on the administration and analysis of the interviews and observations have been provided. The interview questions for both the self-confrontation and semi-structured interviews and the coding frame for the analysis of the interview findings were provided. Technical information on the functioning of the recording software Camtasia was also furnished. The corpus construction and interviewee recruitment process was also reported and background information on the interviewees has been appended. The results of the pilot trial of the research methods and the refinements made in light of the pilot trial were also discussed. In the following chapters, other criteria for assessing the validity of qualitative research are also fulfilled, including "thick description" through the reproduction of verbatim text as well as the demonstration of "surprise value" in the research findings (Gaskell and Bauer 2000, p. 347).

2.9 Assessment of Methods Employed

Due to the relative novelty of the methods used for the qualitative analysis of online shopping actions, in particular the self-confrontation interview method, it is imperative to assess the efficacy of the chosen methods in light of future research interests.

The self-confrontation interview method was particularly effective in investigating the mental activity accompanying and guiding online shopping actions. The self-confrontation interviews yielded descriptive findings from the interviewees including hints to cognitive activity, reports of conscious cognitions relating to decision-making and action-planning, as well as the mention of goals. These findings were similar to the results of Cranach's experimentation with the self-confrontation method (Cranach, Machler et al. 1985). Asking the interviewees to reveal what they were thinking during their actions had the effect of self-introspection.

The self-confrontation interview method also allowed for the immediate retrieval of emotions which are usually not accessible after a considerable period of time has lapsed between action and recall. This was an added benefit of the method as emotions were found to play a significant role in online shopping actions. The act of shopping online just prior to the interview served to remind the interviewee of his/her customary actions and thus stimulated more considered and possibly more accurate answers. As a result, even during the subsequent semi-structured interview, interviewees gave reflective answers when asked about their long-term attitudes and dispositions towards online shopping.

In addition, all of the interviewees found it interesting to observe their own online shopping actions from viewing the video recordings. As each interview progressed, the interviewees would become more comfortable with voicing his/her cognitions and would grow increasingly vocal and descriptive. Camtasia™ proved to be a very useful recording device. Its interface is extremely user-friendly – recording, replaying and pausing the video were simple commands to execute. The fact that the interviewees could view virtually every step they had made, from moving the cursor to keying in text to clicking

on hyperlinks, was very useful in stimulating the recall of action-related cognitions. One key advantage of Camtasia is that it captures on-screen activity in an unobtrusive manner. The only thing that may remind the interviewee that his/her actions are being recorded is a little icon on the bottom of the screen. Since the interviewees did not actually have a video camera trained on them, they became less self-conscious and more relaxed as a result. The semi-structured interviews also proceeded smoothly and the interviewees did not experience any difficulty in filling out the questionnaire.

One downside was that the interview setting was unable to capture offline multitasking, i.e. doing something offline while shopping online such as cooking, or watching television, because the interviews were conducted outside of the interviewees' customary online shopping environments such as their homes or offices. To make up for this shortfall, the interviewees were asked during the semi-structured interview to describe their typical online shopping environments and to recount typical offline activities which they engaged in while shopping online. The self-confrontation interview did however manage to capture online multi-tasking activities such as checking email.

One other limitation of the method was that the interviewees were not shopping on the hardware which they were accustomed to, i.e. their own computers. The Camtasia™ software for recording the interviewees' actions is not a portable recording device like a digital video camera. It had been loaded only onto my own laptop computer. Therefore, all the interviewees had to shop online on my computer. The interviewees were thus unfamiliar with certain hardware aspects such as the keyboard layout and software aspects such as the configuration of my Windows desktop. Ideally, all interviewees should have had the Camtasia™ software installed on their own computers for recording their own online shopping actions. However, this was impractical due to the hassle that would be imposed on the interviewees, as well as the financial costs of purchasing multiple copies of the software. Given these constraints, this limitation of the method could not be overcome. Nonetheless, given that the interviewees were asked to shop online using the widely-distributed Internet browser software Microsoft Explorer, unfamiliarity with the software was minimised. Therefore, this limitation is a relatively minor one.

2.10 Conclusion

This chapter began with providing background on the e-commerce retail market in the US and the online shopping environment which consumers are exposed to. Trends in Internet and online shopping adoption in the US were also discussed. Principally, the chapter explained in detail the methods used in the qualitative, in-depth study of online shopping actions. The choice of the self-confrontation interview method over the thinking aloud and interruption methods was first explained. The procedures and data analysis methods for the self-confrontation interviews, systematic observation, semi-structured interviews and self-administered questionnaire were also described.

The interview questions for the self-confrontation and semi-structured interviews were provided and the self-administered questionnaire has been appended. The coding frame for the systematic observation of online shopping actions was also furnished. Information on the software Camtasia utilised for the video recordings was also provided. Where relevant, refinements made to the research methods in light of pilot trial findings were highlighted. The interviewee recruitment process which adopted a corpus construction approach was also explained. Profiles of the interviewees have also been appended. Finally, the chapter concluded with an assessment of the efficacy of the qualitative research methods adopted.

The next chapter will present in detail the action structures of the interviewees who shopped online during the self-confrontation interviews. These action structures will be analysed using the theoretical framework laid out in Chapter 1.

3 QUALITATIVE ANALYSIS OF ACTION STRUCTURES

This chapter will analyse in detail the action structures and action-related cognitions of selected interviewees using the theoretical framework outlined in Chapter 1. Each of these action structures was selected for detailed analysis because they had distinct features in terms of either action structure, cognitive processes or dispositions. Each of them was also chosen for the purposes of illustrating different aspects of the theory of activity and goal-directed action when applied to online shopping. The effects of situational variables on actions will also be highlighted where pertinent.

The different action structures which will be presented are of the following types: (i) state-oriented, varying goal, (ii) action-oriented, varying goal, (iii) state-oriented, fixed goal, (iv) action-oriented, fixed goal, (v) routine (vi) multi-tasking, (vii) knowledge-driven. For each action structure, background information on and dispositions of the actor will also be discussed as these influence the nature of their interactions with the online interface (Ravden and Johnson 1989).

3.1 THE STATE-ORIENTED, VARYING GOAL STRUCTURE

Kevin's action structure is noteworthy because one can see the effects which state-orientation can have on online shopping behaviour. Based on the results of the self-administered questionnaire, Kevin was the most state-oriented of all of the interviewees and this was evident in his online shopping action structure. In particular, the instances of goal divergence which arose as a result of his state-orientation and bidirectional adaptation will be highlighted.

Background

Kevin, aged between 21 to 25, was in the midst of completing his postgraduate degree and was about to embark on his first job as a computer services assistant. His wealth of technical knowledge and his affinity for all things technical, such as website design and videogames, drew him to online shopping. He enjoys shopping generally and prefers online shopping to conventional shopping – a realisation which struck him during the interview itself!

Kevin estimated that half to two thirds of his total shopping needs are met by online shopping. He shops online at least once a month and buys a wide variety of merchandise including clothing, electronic equipment, books, CDs and plane tickets. He even purchased a copy of his birth certificate online, from his state registry. He feels that his shopping expenditure has increased with the advent of online shopping: "*I spend more money because I can shop online because it makes shopping so much easier*". His online shopping "trips" are just as likely to be intentional, where he goes online for the purpose of shopping, as they are to be incidental, where he shops online while doing something else on the Internet. He often multi-tasks when he shops online, by either checking his email or chatting with his friends in an online chatroom. He shops online both at home and at work. At home, he has dial-up access but at work he has broadband access.

Action structure

Kevin commenced his online shopping at a store which had just sent him a copy of their catalogue. He had already browsed through the catalogue that morning and was interested in purchasing some of the products featured in the catalogue. Although Kevin's actions were goal-directed, he was nonetheless highly susceptible to what he was exposed to in the online environment. This is not surprising as he was the most state-oriented of all the interviewees. His state-orientation constantly mediated between his motivation and his action. Consequently, goal divergence occurred frequently.

Goal generation processes occurred to first direct him towards searching for a pair of shoes and second to locating a videogame. He spent the majority of his time on fulfilling the latter goal. At the very start of his online shopping activity, goal divergence was already evident:

> *"Well, there was one pair of shoes that I saw in the catalogue this morning that I was really interested in. But the first pair of shoes, the first shoe that caught my eye when I was looking was that pair. Just the colour I guess being different caught my eye."*

As his online shopping continued, it was obvious that he was not averse to viewing other products which he had not planned on buying:

"Well, I'd gone to Skechers kind of with a mission, like to just see that shoe, that one shoe that I'd just seen in the catalogue and then I decided to just take a look at the offering in the casual shoes."

When Kevin had finished shopping for shoes, he proceeded to shop for a videogame but in the process, was waylaid and ended up viewing a range of hardware. His attention was constantly diverted from his original goal (the underlined portions indicate goal divergence):

"Well, I got sidetracked because I saw another stand and then, I saw, I was reading about that. That's why I stopped here cos I was like 'Hmm...what's the vertical stand for?' cos I knew they already had one for DVDs. Then I got further and something else caught my eye was that I read about the memory card. We're gonna get down a little further in this and there's another remote control and it's a different remote control which I thought was interesting. All these cables – I thought 'Wow' and they were all excited about these cables but they're only 10-feet long. That's not very long. I just thought, 'That's nothing to be excited about.' Then I thought, 'Aha! Another remote control.' It's the same company but it's a different remote control."

In this short action sequence alone, there were five instances of goal divergence. A goal protection cognition only arose towards the end of Kevin's online shopping trip to steer him back to his original goal: *"I was gonna leave and then I thought, 'No I wanna look up my video game'"*.

Kevin's goal was to locate a videogame but he was repeatedly thwarted by the failure of the online store's search engine to locate the right product. Goal-directed action theory asserts that actors become conscious of their actions when they encounter difficulties in achieving their goals (Harré 1982). The level of attention processes becomes very high as the actor focuses on steering and adapting his actions to meet his goals. In Kevin's case, his repeated failure to locate the videogame led to the occurrence of action steering and action monitoring cognitions which redirected his actions towards fulfilling his goal:

Action	Cognition	Cognition Type
55. Keys search string "black and white" into website's search box and hits "Enter"	I was gonna leave and then I thought, "no I wanna look up my video game". ...then I was really disappointed when I looked up Black and White and it said they didn't have it. Then I thought, "I'm not having any luck with their search engine," that's what I thought and so instead of trying another search term like I did	Goal protection; Action steering; Action accompanying

Action	Cognition	Cognition Type
button on keyboard	before, I just went and then, oh another thought which really irritated me was I was looking for software or something like that over here in this black portion but it's just video game stuff still.	
56. Clicks on "Entire Site" link	And so I thought "oh, I need to click on entire site to go back to entire site". As soon as I clicked on entire site I realised that no, that's just for it to search the entire site. Right. And then I thought ok, ok. When I realised that "go entire site" meant search the entire site I was like, "Ok, I'll search the entire site since before, I realised I'd only searched video games and Black and White I know is software only for the PC."	Action steering; Action monitoring; Knowledge; Action steering
57. Clicks on "Software" link	Then I thought I'd search again but I decided no, I'll just cut to the chase and go straight to software. So my cursor went there because then I thought, oh that's just the software. And then I clicked go entire site to search the entire site and it did take me there. It took me to the menu. So this'll take me straight there, then I'll browse and try to find it.	Action steering
58. Studies information on Software page	Yes, I thought, supposedly this is the hottest game out there, like it's most innovative, everything. Like people expect it to just jump off the shelves and it just came out last week. So I thought, my first thought was I expected it to be the number one thing I saw. But I didn't, I saw Improv Battle for Dune which I thought, "Ok, that's another new game so Black and White has to be further down." That's what I thought. It's got to still be on this first page, just further down. And I scrolled down and I saw these and I thought, I didn't read that. I was looking for a box cover and so I didn't even see that so I got frustrated and I said, "Well I'll just check coming soon cos maybe I'm wrong that it's not up there."	Knowledge; Emotion - frustration
59. Clicks on "Coming Soon" link	So I go to coming soon and it's the same thing. So I'm like I must have missed it and I did.	Action steering
60. Studies information on Coming Soon page	Yes, well, I clicked "coming soon" and I thought maybe it's a title that's coming soon. And then it's the same page, then I thought I had to have missed something. So I scrolled down.	Action steering
61. Clicks on "Black and White" link		
62. Studies information on Black and White page	And then I'm amazed that when I click on something that I think, what I anticipate coming up is just a box cover and some writing and you know, "this is how much it costs". But instead I get this, which is very interesting. But I'm like "Great" (expresses disdain) this isn't what I need cos I'm wondering how much it costs, first off. Then it's like "for shipping time and available product format see product detail pages" and so I scroll back up. Like on the other, the Playstation 2, it said product detail and so I was looking for that. I thought I must have missed it and it's just not there. So I'm thinking "ok, what do I do?" And I almost read there until I read, "we want you to download this gorilla." And I'm like, "No!" (expresses extreme frustration)	Emotion – frustration; Action monitoring; Emotion - frustration
63. Moves cursor across the different graphical elements of the Black and White page	And so I'm trying to figure out what to click on to find the information that I want and eventually I realise that sometimes on what I consider really badly designed web pages, they hide the buttons under visual elements. I eventually think that.	Knowledge; Memory

From the above sequence of cognitions, one can see that cognitions are not single but multi-faceted in that many cognitions are hybrids, serving more than one function. Action monitoring cognitions also tend to be closely associated with action steering cognitions. This is clear evidence of the process of checking whereby the previously executed action is assessed for its goal fulfilment potential.

Action accompanying cognitions in the form of emotions also occurred. These emotions also play a part in influencing actions as they affect the motivation state of the actor to fulfil his goal. In Kevin's case, his feelings of disappointment and frustration energised him into coming up with alternative ways of meeting his goals. Take the sequence of cognitions which accompanied Kevin's actions number 32 to 37:

Action	Cognition	Cognition Type
32. Keys search string "ps2" into website's search box and hits "Enter" button on keyboard	At first I decided to figure out how in the world to navigate it, then I decided just to Try "search"...I was looking for the Playstation 2.	Action steering
33. Studies search results	And lo and behold, I was disappointed to find out that I look up PS2 and I don't get Playstation 2.	Emotion – disappoint-ment
34. Keys search string "Playstation 2" into website's search box and hits "Enter" button on keyboard	And I thought okay, "Playstation 2". Let's spell it out for them. Cos everybody calls it a PS2.	Action steering; Emotion - frustration
35. Clicks on "Go" button under search box		
36. Clicks on "Stop" button on browser	I don't know what I was thinking there. Oh, I was waiting for it to load and so I tried to click it again and I was getting really frustrated that it was taking so long to load....	Emotion - frustration
37. Clicks on "Stop" button on browser	And then I eventually stop it, stop it loading because it loaded like halfway up and I wait for it to stop and I try to do it again and what's going through my head is if it takes long this time, I'm gonna go to another site if it takes too long to process my...because I'm not even sure if that they have Playstation 2 at this point. So, why wait again because it's just going to come up empty.	Action steering; Emotion - frustration

Action accompanying cognitions arose constantly throughout his actions, a significant proportion of which were emotions. He had a whole gamut of emotions ranging from disappointment to annoyance to incredulity and frustration. Other action accompanying

cognitions served the role of alerting Kevin to the results of his actions. Figure 3.1 is a diagrammatic representation of a generic state-oriented, varying goal structure.

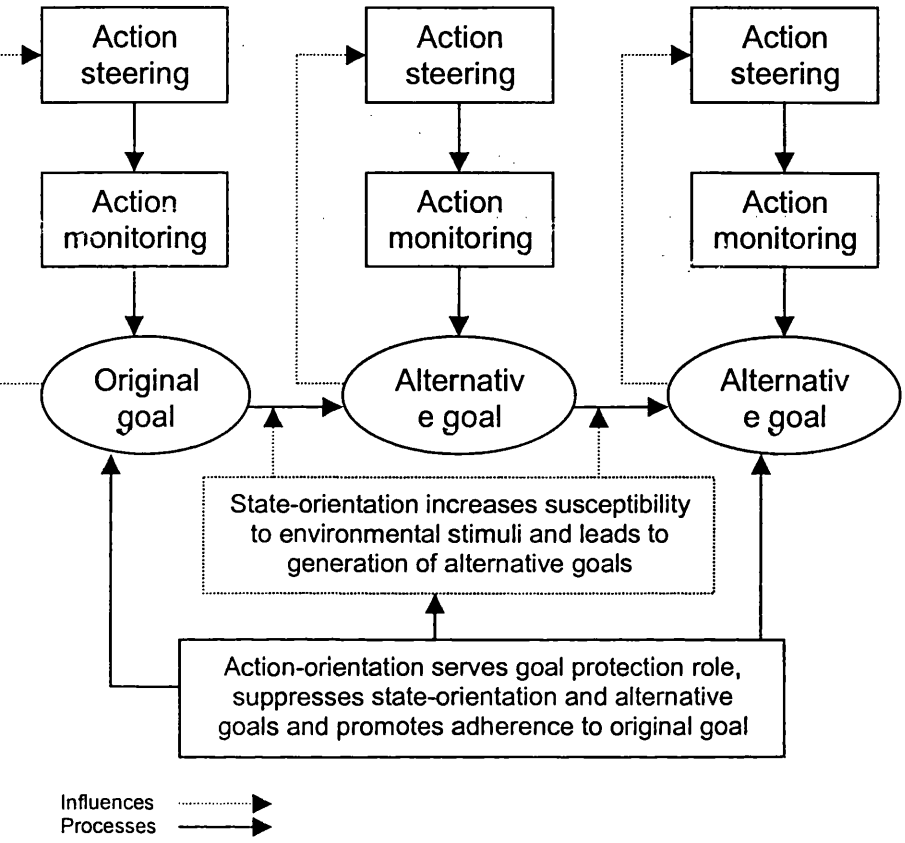


Figure 3.1 Diagrammatic representation of state-oriented, varying goal structure

Dispositions

Several types of mental dispositions guide Kevin's online shopping actions. As discussed above, his state-orientation plays a key part in making him especially susceptible to stimuli in the online environment. In fact, Kevin himself recognises that he is prone to being diverted from his planned actions by such stimuli. When asked to comment on his usual response to banner advertisements, he noted:

> *"As much as I would like to think that advertisements don't affect me, (laughs) like I don't pay any attention to them, sometimes they do catch my eye like reading news on ZDNet or MSN.com or something like that, I'll click through to an item."*

And when asked for his views on the statement "I get so involved when I shop online that I forget everything else," his response was:

> *"...when I'm at work and I'm shopping online and I'm on this Ethernet connection, and things are just going, because I have a tendency, like you saw how I'll like go one place and then just end up there and there...I can just do that for hours. One day at work I was looking for a palm pilot and I was at work for 8 hours and I spent 8 hours looking for a palm pilot. So, I guess so. I can get pretty intense."*

From the above statement, it can also be posited that Kevin has experienced flow in his online shopping. He finds online shopping entertaining, feels that it picks him up and agrees that it helps him to forget about the day's problems.

His positive attitude towards online shopping, indeed his enthusiasm for online shopping also allays any feelings of suspicion and uncertainty which might influence his actions. When asked for his opinion about the use of cookies and the collation of customer's personal details by certain online stores, his response was:

> *"I don't really care that Amazon's tracking what I'm buying because I think that is just good, good business and I don't fault them for being a good business and trying to find out what their customers want."*

His online shopping actions are also influenced by the fact that he is price conscious given his student status and is consequently more concerned with getting value for money than with patronising reputable stores with excellent service.:

> *"And the way I'll choose between three companies that all have the same price for something that I'm looking for is I'll choose the one with the lower shipping rate. Because customer service and things like that aren't really important to me because I've rarely ever used them and so that doesn't matter. What just matters is that they'll tell me that they'll get it to me in two to three days for just six dollars."*

Memory processes also help to guide his actions. Some of these memory processes had developed from his previous experiences with specific websites:

> *"Well, I'm looking for casual shoes so I just, I knew...I've been to this site before so I knew to go to Men's and they have a little drop down menu and I chose 'casual' from the drop down menu."*

Kevin also has expert knowledge on how websites are designed and this aids him greatly in his product search. During the online shopping exercise, he managed to locate the information he required because of such expert knowledge:

> *"And so I'm trying to figure out what to click on to find the information that I want and eventually I realise that sometimes on what I consider really badly designed web pages, they hide the buttons under visual elements."*

Were it not for his expert knowledge, Kevin is likely to have failed in locating the required information, and would consequently have left the online store frustrated.

Not only is Kevin an expert shopper in terms of his knowledge of online interfaces, he is also very familiar with the products he is shopping for. This makes it much easier for him to locate the product within an online interface because the systems by which online stores classify their merchandise are not as readily apparent as in a brick-and-mortar store. As an expert consumer, he knew the different product classifications which the videogame traversed and could therefore choose to look under these different classifications: *"I realised I'd only searched video games and Black and White I know is software only for the PC."* Evidently, Kevin has to tap into many disparate bodies of general and specific knowledge when he shops online.

3.2 Action-Oriented, Varying Goal Structure

Nicole's action structure is interesting because it shows how action-oriented shoppers can also be susceptible to environmental influences, which lead them to have varying rather than fixed goals.

Background

Nicole is a graduate student, aged between 21 to 25. She does not own a car and therefore relies on online shopping for much of her shopping needs including clothing, footwear, furniture and electronic equipment. She is a dedicated user of Yahoo services including its email and online shopping facilities, the Yahoo Shop Engine. She is an efficient and sure-footed shopper, especially within the Yahoo shopping arena.

She enjoys shopping online as can be seen from this quote:

> *"I really like that thrill of like pressing "send order". I kind of like that...It's like the same thing when your credit card gets swiped. It's like you're spending money...And I love getting mail. Part of the reason why I love shopping online is that I just adore getting packages."*

She often multi-tasks when she shops online such as checking email, which she also did when she shopped during the interview. She has a habit of deciding on online shopping purchases independently and tends not to consult friends or family members.

Action structure

Nicole shopped online for a sewing machine. Her actions had a distinct hierarchical-sequential structure. She first conducted a general search for sewing machines through the Yahoo search engine which she was familiar and comfortable with. When this search generated too many results, she decided to narrow them down by price to filter out the irrelevant results. She had clear criteria for the sewing machine which she wanted:

> *"...I was scrolling for cheap ones because I really don't want to spend more than like 150 dollars for a sewing machine 'cos I don't think I sew enough to justify a 200 dollar sewing machine."*

With this criterion in mind, her search became even more focused and goal-directed. Her next step was to check on the quality of the different brands of sewing machines available: *"...I decided to do a search to see if anyone had any online reviews like what brands are good 'cos I had no idea."* She also multi-tasked in the initial stage of her action, where she checked her email account and read several new messages.

Action monitoring cognitions occurred throughout Nicole's actions to assess the efficacy of her actions. These led to the occurrence of action steering cognitions to modify the course of the action to take. Again, as seen in the case of Kevin, action steering and action monitoring cognitions are closely associated. Take the following action-cognition sequence as an example:

Action	Cognition	Cognition Type
35. Clicks on "show listings by increasing price" link	So at this point I realised they were all mixed up so I decided to sort them by increasing price.	Action monitoring; Action steering
36. Clicks on "Next" link to	And then it looked like there was all sorts of	Action monitoring;

Action	Cognition	Cognition Type
go to next page of search results	random stuff like phones, Batman comforter set. I really liked that so I stopped to look at the Batman comforter set. And all this stuff, they weren't sewing machines. They just happened to have the key words in them. So then I think I decided to sort them by price further.	Action accompanying; Action steering
37. Clicks on "Narrow your price to $72-$90" link	Oh no. I think at first I was gonna scroll through to see if I hit sewing machines in my range. So then I think I figured 75 would be my range. Yeah sometimes I don't wait for the pictures to load cos you can just look at the words and so like embroidery cards, that's not what I wanted.	Action steering
38. Clicks on "Next" link to go to next page of search results		
39. Studies search results		
40. Keys search string "sewing machine stitch" into search box and clicks on "Search" button	So at this point I decided that my search wasn't narrow enough and I noticed that all the sewing machines had like "stitch" in them and so then I decided to like try "sewing machine stitch" to try and get rid of like all the embroidery cards and stuff cos it's too much. So then that was better cos these were all sewing machines. And so then again I decided to narrow it down by price.	Action monitoring; Action steering

After she shopped for sewing machines, she proceeded to shop for other products. She could not decide on what else to shop for until she noticed something interesting:

> *"I think I was just trying to decide what to look for next. I was thinking about my mental shopping list like what else I wanted...and then all of a sudden I saw this free shipping centre and so then I was like 'Oh', cos I always like free shipping and then I decided to check out like what stores are offering free shipping. And so then this page triggered like all these things that I could hypothetically shop for."*

She then proceeded to click on different online stores in the free shipping centre. She went from coolcheapstuff.com to officemax.com to bluenile.com to shoebuy.com in just six minutes. She flitted from one online store to another, in the process, checking the price of a personal digital assistant which she had already purchased to verify that she had gotten a good price on her purchase. Her actions were therefore susceptible to the stimuli in the environment which caused her goals to vary. This is a clear sign of bidirectional adaptation where she modified her actions in response to situational variables.

At this juncture, a distinction should be made between varying goals and multiple goals. One could argue that action-oriented shoppers have multiple goals rather than

varying goals. Once they have fulfilled one goal, their state-orientation leads them to generate new goals based on environmental cues. Their action- orientation drives them to fulfil these new goals quickly and even newer goals are generated based on environmental cues and so on. This is in contrast to state-oriented shoppers who seek to fulfil other goals even before they have fulfilled their original goals, as in the case of Kevin. Nonetheless, these multiple goals differ from fixed goals in that they were not premeditated nor planned in advance by the actor, but were stimulated by environmental factors. As such, multiple goals should be considered a subset of varying goals. Fig 3.2 is a diagrammatic representation of an action-oriented, varying goal structure.

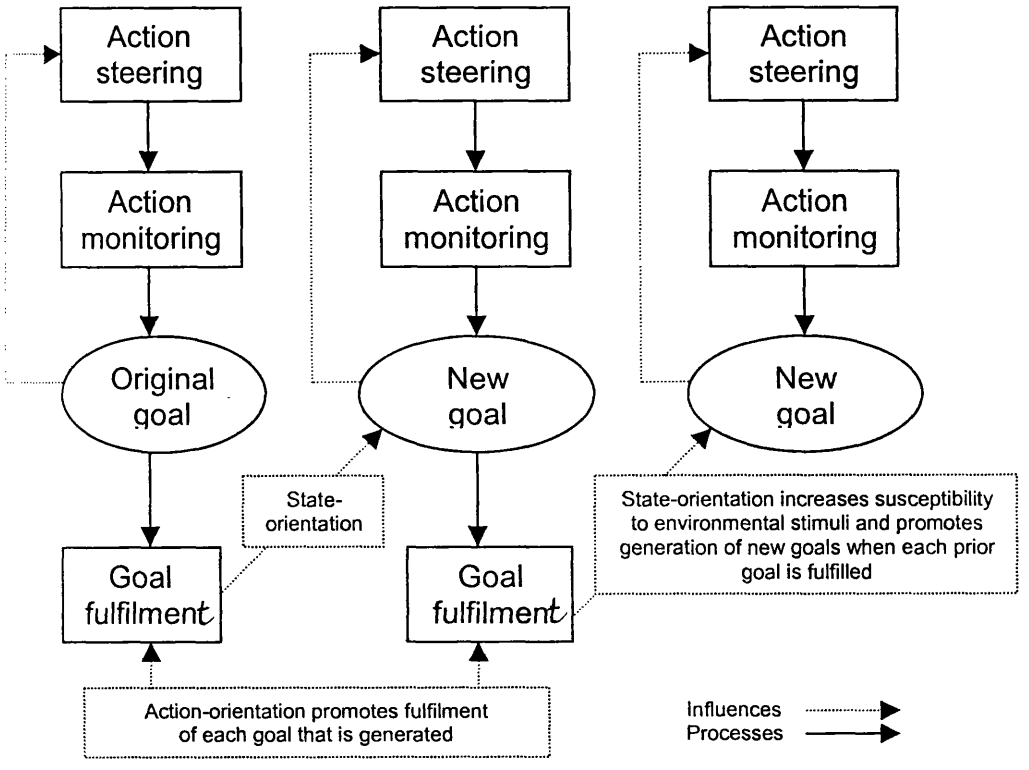


Figure 3.2 Diagrammatic representation of action-oriented, varying goal structure

Dispositions

One key disposition influencing Nicole's actions is her trust in Yahoo. Despite having the flexibility to patronise whichever online store she chooses, her preferred course of action is to go through Yahoo. When she encounters online stores which look

dubious, her suspicion is mitigated by the fact that Yahoo has adopted that particular store as its retail partner:

> *"These other stores that I didn't know anything about I guess in some ways I've considered whether or not they're shady or 'scammy'. But I guess since I always find them through Yahoo, I guess I just really trust Yahoo. Anything that has a Yahoo relation I feel really comfortable shopping."*

Indeed, even Nicole acknowledges that her faith in Yahoo might be misguided: *"I don't know why I trust Yahoo so much. It's not like they go through and look at the stores."*

Her habitual usage of Yahoo has also developed into routine shopping behaviour which in turn gives rise to greater efficiency and perhaps automaticity in her actions. The constant repetition of actions on the Yahoo website had led to a mental map of the site being stored in her memory. Her use of such facilities as the "sort by price" and "narrow your search by price" feature did not entail a process of first locating different features and understanding their functions. She appeared to click on these links unthinkingly in Actions 30, 41 to 43, 55 to 57 and 62. In addition, if one studies her cursor movements closely, one can see that there is hardly any wavering or hesitation before she clicks on these permanent features of the interface. Her memory processes led her towards them rapidly and without any deliberation.

Another disposition which is likely to impact on Nicole's actions is that of flow. Nicole seems to have experienced flow while shopping online. She admitted to daydreaming about products and services which she saw online and to shopping online for the pure enjoyment of it. She also mentioned that she tends to be very focused in whatever she does:

> *"Well I tend to be really focused when I do things anyway so if I was shopping and someone said something to me...like I had no idea what you were doing around me when I was doing this. So I guess I get pretty involved. But I think I do that anyway, whether I'm checking email or talking on the phone, I'm really focused in whatever I do. So I don't think it's the online shopping part that makes me focused. I just tend to be focused in what I do."*

It is perhaps the flow state which mediates between her action-orientation and her actions, so that even though she is action-oriented, she remains susceptible to

environmental influences and is therefore prone to having varying goals or multiple goals in quick succession.

3.3 STATE-ORIENTED, FIXED GOAL STRUCTURE

This action structure is interesting because it shows how an action-orientation can be both a disposition and a goal protection process. In this case, Tom is a state-oriented shopper who recognises his state-orientation. As a result, he has internal safeguards, i.e. action-orientation processes, which encourage goal protection and promote adherence to a fixed goal.

Background

Tom is an information technology administrator aged between 36 to 40. He buys a variety of products online including computer peripherals, CDs and books. He enjoys shopping both online and offline but does not browse casually online as he would in a brick-and-mortar store:

> *"...I actually like to shop. I like to, you know every couple of months or something just go to the mall and spend like the entire day eating bad food, looking around and sometimes I don't buy anything but I really like the idea of shopping...But I don't go on the Internet looking for something to buy where I might just go to the mall and look at things for hours. To me it's not the same thing at all. Like at work I get very fast Internet access and it's still not even close to being the same thing. I mean things pop up immediately. They're there and they're gone except that I can't sit there and look at everything for hours."*

His online shopping "trips" are hence more purposeful and intentional rather than incidental. Tom multi-tasks both online and offline when he shops online. He would often either be cooking and chatting online with his friends at the same time.

Action structure

Tom shopped online for scrubs, a work outfit for nurses, for his girlfriend. His actions took on a clear hierarchical-sequential structure. He did not know where to buy such merchandise and began by using a search engine to locate relevant online stores. He quickly identified from the search results a relevant store and rather than following the search engine's link to the store, he proceeded to key the URL of the store directly into

the website address bar. Once he was in the online store itself, he searched for the item he needed using the store's search engine. His level of attention appeared to be high and most of his action-related cognitions were action-steering.

Action	Cognition	Cognition Type
1. Amends URL to: www.yahoo.com	So I went to yahoo and did a shopping search there. On any given day I might just as well have gone to AskJeeves and ask, "where can I go to find medical supplies and whatever". But literally, Yahoo found exactly what I was looking for. And it was the first hit that came back.	Action steering; Action monitoring
2. Studies information on www.yahoo.com Welcome page	Right now I'm thinking, "Hmm...I haven't really seen this in years probably." And I was trying to figure what I should be clicking on. I assumed that I should put something in here and then I just read a little bit. Maybe this would take me closer to where I wanna be if I just went there. So I clicked on shopping. Barnes and Noble – I'm sounding them all out to myself.	Action accompanying; Action steering
3. Clicks on "shopping" link	Umm...well, I guess that I just thought I was in the right place. That's basically it.	Action monitoring
4. Keys search string "medical supplies" into search box	So I've come to my search results and I believe I scrolled through everything and actually here I was a little bit discouraged because it was showing me specific products but I put in "medical supplies" and what I wanted really was a list of the companies that would sell medical supplies.	Action monitoring
5. Studies search results	...and I was disappointed that I was seeing specific things	Emotion - disappointment
6. Clicks on "AllHeart.com Scrubs, Uniforms, Littmann Stethoscopes" link	And then I scrolled back to the top and then I saw "scrubs". So, and then I saw this allheart.com.	Action steering
7. Studies information on "AllHeart.com Scrubs, Uniforms, Littmann Stethoscopes" page	So I knew that that was the company even though I'm in Yahoo's interface where it was showing me an orthoscope. I first clicked on that thing and decided, "Well I might as well just go to the company."	Action steering
8. Amends URL to: www.allheart.com	So I believe what I did then was that I went straight to the company and I bypassed Yahoo because that was I wanted. I wanted to go to scrubs, medical bags and stuff like that. Yeah I basically decided that I'm through going through Yahoo. I'm only going to be seeing what they're doling out at that particular moment. And since they're offering me the company name, I went directly to it.	Action steering

His actions were rapid, and he focused very quickly on the parts of the websites which were relevant to his needs, ignoring all others:

> *"Actually, I don't look at most of what's in a webpage that I go to. I just want to know where it is I want to go or what I need to do and I never look at banner ads and I never click on something that says, 'Click here'. I just do what I want to do because otherwise you can waste your whole life. I suppose five years ago, you*

know I was looking at everything, clicking everything just to find out what it was but it's been so long that I know how to get where I want to go. I know people that look at everything."

This is a sign of Tom's action-orientation processes at work. His action-orientation serves as a goal protection mechanism. It mediates between his state-orientation and his goal enactment activities, guiding him towards successful goal fulfilment. It steers him towards concentrating only on parts of the website which relate to his goals, blocking out extraneous portions.

Dispositions

Tom appears to have experienced flow in his online shopping. He finds that online shopping picks him up and he agreed with the statement "I get so involved when I shop online that I forget everything else":

"I agree with that. I can remember many many occasions telling my girlfriend, 'I just need five more minutes or whatever.' And then she'll tell me later that it's been twenty minutes or half an hour so I've been like totally oblivious. So yes, I can get pretty involved."

One's propensity to experience flow is increased with a state-orientation. How then can we reconcile Tom's action-oriented online shopping behaviour with his state-oriented propensity to experience flow? It can be argued that Tom's long-term disposition is one of state-orientation and this orientation prevails when he is not in the process of purchasing something online, but is perhaps researching a product or comparing prices, i.e. he does not have a clear, well-defined goal. However, when he has a specific, well-defined goal to achieve such as buying scrubs for his girlfriend, his action-orientation processes are energised and these steer him towards goal fulfilment. An individual's state and action-orientation are along a continuum. Individuals can be more state-oriented and less action-oriented at some points in time and more action-oriented and less state-oriented at other times depending on the exigencies of the situation. Most of the time however, individuals are likely to veer consistently towards the same end, i.e. they are likely to be either predominantly state or action-oriented.

Generally, Tom is enthusiastic about online shopping and sees it as a useful tool:

> *"I love it cos it's, I don't think that it probably replaces conventional shopping but I really like being able to just do it when I want to do it. It could be two in the morning, could be my lunch hour...But I like the fact that I can do it when I want and I like the fact that I can actually get descriptions of things and then if I'm very interested and concerned about some aspect, I can usually go somewhere else or maybe right there find people's comments and reviews or whatever. So from an informational standpoint I love it."*

This positive disposition will only serve to encourage Tom to shop online more. Another disposition which influences Tom's online shopping is his knowledge of Internet technologies. Given his occupation as an information technology administrator, Tom has a good working knowledge of Internet technologies and therefore makes a habit of using comparison shoppers and web forums to guide his shopping. This knowledge is likely to make his typical online shopping actions more complex than those of the average online shopper.

3.4 Action-Oriented, Fixed Goal Structure

Mike's online shopping action structure is of particular interest because he had fixed goals. It is illuminating to study how these fixed goals directed his actions and to note how his action structure differs from those of Kevin and Nicole who had varying goals.

Background

Mike is an administrator of the middle management level, aged between 51 to 55. He buys a rather wide range of products online including food, plane tickets, hotel reservations and household products. Typically, his online shopping activity is intentional and purposeful where he goes online to specifically shop for something. He does not multi-task either online or offline when he shops online: *"I do it either in the library or here [the office] and normally in the evening when there's really nothing else. No other distractions...Get on and do what I have to do."* His business-like approach can be seen in his actions as well. Not surprisingly, the results of the self-administered questionnaire revealed that Mike was the most state-oriented of all the interviewees.

Action structure

Mike shopped online for two items - steaks and ceiling fans. For both items, his action structure had a distinct hierarchical-sequential nature with a linear progression of activities from selecting products and studying product attributes to narrowing products down by price and comparing product prices. Like Tom, most of Mike's action-related cognitions were action steering. Take the following action sequence for example:

Action	Cognition	Cognition Type
50. Clicks on "Price Meat Company Surf n' Turf" link	Well now I'm choosing different brands with different combinations. Like with the Prince meats which is different combinations. I wanted to see what theirs were. I'd never heard of them before. So I thought I'd look to see who they are.	Action steering
51. Studies information on "Price Meat Company Surf n' Turf"page		
52. Clicks on "Back" button on browser		
53. Studies search results		
54. Amends search string to "filets 10 oz" and clicks on "Search" button	I went to search by size because there's a hundred and fifty odd products and I said I'm not gonna waste time going through them.	Action steering
55. Studies search results	Yeah and you can see I got just seven. I didn't get all the ones that were there.	Action monitoring
56. Clicks on "Kansas City Steak Six 10 oz Triple-Trimmed Filet Mignons" link	And I just wanted to double check the $78 plus $12 for shipping. So that's what I would have bought at this point in time.	Action steering
57. Studies information on "Kansas City Steak Six 10 oz Triple-Trimmed Filet Mignons" page		
58. Clicks on "More Search Options" link		
59. Keys in information in "Power search" interface and clicks on "Search" button		
60. Studies search results	And that's where they had 150 products. Then I just glanced to see if I saw any different companies besides Kansas City.	Action steering

Most of the cognitions were action steering and unlike Kevin, no emotions occurred, at least insofar as Mike revealed. Mike is therefore a rather detached shopper whose actions are focused and are geared towards obtaining the product information he requires without any unnecessary diversions: *"I zoom in on what I want and try to eliminate the extra stuff."* From the action structures of both Mike and Tom, one can see that goals have an action steering function, clearly directing the course of actions until goal fulfilment is achieved. Therefore, when fixed goals occur, they also help to inhibit state-orientation as

in the case of Tom. Figure 3.3 is a diagrammatic representation of state- and action-oriented fixed goal structures.

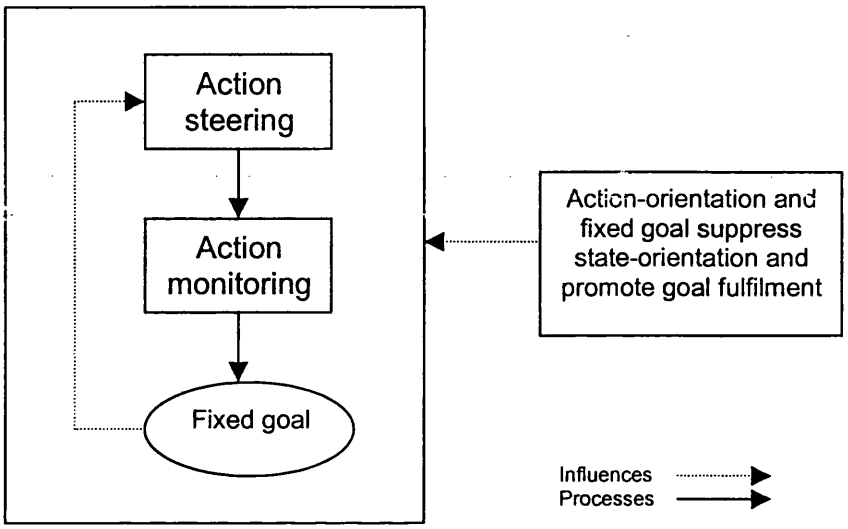


Figure 3.3 Diagrammatic representation of state- and action-oriented, fixed goal structure

Dispositions

As a result of Mike's strong action-orientation and business-like attitude towards online shopping, it was evident that he did not experience flow in online shopping:

> *"When I'm thinking of shopping, I'm not thinking about my problems...I don't forget about everything else. No I don't daydream about the products. At times I find it entertaining to find the best price...If you just plug in and you buy the first thing you'll be frustrated when you find that you could have bought the same product for 20 per cent less. It picks me up when I'm successful buying something. I don't shop for the pure enjoyment of it. I work all the time with computers. I really don't have the time for that."*

Nonetheless, Mike has a positive attitude towards online shopping. He appreciates the convenience rather than the recreational aspects of online shopping:

> *"It definitely helps and saves time. It helps me do the comparison shopping and figuring out, learning about the product before I look at it. There's something that I can look at. I can actually eliminate things, eliminate trips. I can say, 'I know I don't want this particular model.' If they have this I'll look at it. If they don't I won't go and waste my time."*

Mike is an essentially store conscious online shopper. His policy is strictly to shop with established stores and websites. This policy helps him to expedite his actions as he does not have to waste time assessing the reliability of an online store:

> *"I do reliable companies that have been there. Not something off the wall...Like QVC where I know and travel sites where I know. Unlike some of the other ones that I don't know that well. I've heard of people who have lost money on some of these travel sites. They buy things that don't exist. So that's why I'll mainly deal with like the airlines, or expedia.com or something like that. Those are the ones that I'll deal with. I may look at the others for shopping purposes to see what kind of prices they have, but then I'll go back to United to see if their prices are the same or close."*

3.5 ROUTINISED STRUCTURE

Elaine's action structure is noteworthy because the shopping which she undertakes during the interview is part of her routine shopping. The process of routinisation has distinct effects on Elaine's actions. Her actions also show how actors can simultaneously manage different action routes and seek to fulfil a multiplicity of goals.

Background

Elaine is a postgraduate student who is planning her wedding in a year's time. She does not own a car and thus finds going to the mall inconvenient. Most of her purchases are made online, including clothing, accessories and computer peripherals. Elaine feels that her online shopping style differs from her offline shopping style:

> *"I think that in the store, it takes me longer to buy something and it's much more a process of I'll be looking at several things and consider them and end up making a choice. With online, it's more like, 'Yep. That's what I wanted. Great. Buy it.' It's so much more specific, targeted, fast and in the store I hem and haw a lot more and I spend a lot more time looking at it and considering."*

Elaine's studies occupy most of her free time so even her time for online shopping is limited. These time-constraints have conditioned her into being very efficient at shopping online. She often shops at several different online stores at the same time. This was also demonstrated during the self-confrontation interview:

> *"And this is definitely how I usually shop. Even if I start saying I'll look for shoes, I immediately open up a new window and I end up looking at all these other things. So this is very typical...I think it comes from having no time to shop so it's like every night, like every evening before I go to bed I have to send an email to somebody or schedule a meeting or do something online and when I'm waiting for that to happen I'll do a little shopping on the side. So I've gotten very used to like multi-tasking and flipping back and forth."*

She multi-tasks both online and offline. When shopping online, she is often working on an assignment on her computer at the same time, watching television or a combination of both. She is extremely comfortable with online shopping, having used the Internet for nine years and shopped online for six years. She occasionally emails her friends or family to consult them on purchases she is uncertain about.

Action structure

The most interesting aspect of Elaine's online shopping action structure was the occurrence of automatic actions. Her habitual usage of several websites had conditioned in her several automatic actions, performed in response to specific activities of the online stores, without either action steering or action monitoring cognitions to guide them:

> *"Well as the new window pops out, The Knot always has a little added window and runs the bigger one and so I know to wait for it so that I can just shut it as soon as it opens out. So I mean this is what I was doing right then, I was waiting to shut that."*

Her practice of toggling between different Internet Explorer windows was also automatic, wherein the moment she clicked on a hyperlink on one window, she toggled to the other window while the information in the first window was loading. This practice helps her to maximise her online shopping time. Indeed, her toggling between windows had become an almost Pavlovian response where the moment she clicked on a hyperlink in one window, she would switch to study the information in the next window: *"...I just hit for it to go to a new page and so just instinctually like while I'm waiting for it, I'll go back."* Figure 3.4 is a diagrammatic representation of a routinised action structure involving automatic actions.

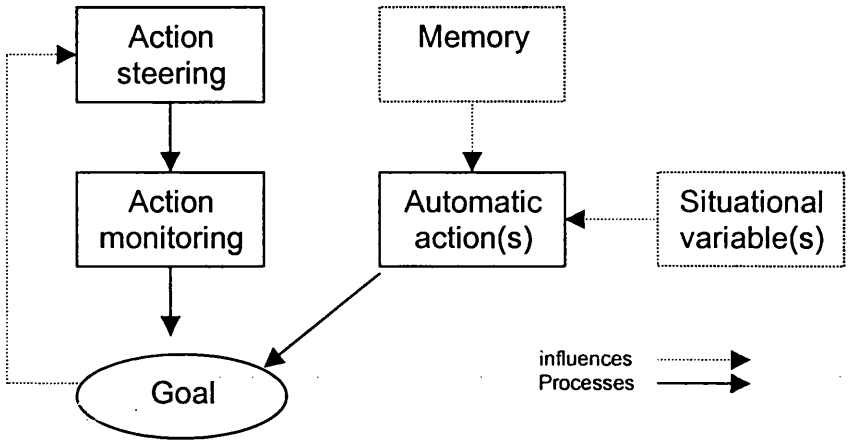


Figure 3.4 Diagrammatic representation of routinised action structure with automatic actions

During her online shopping exercise, Elaine opened no less than three Internet Explorer windows and conducted activities in the three windows simultaneously. She had two goals to fulfil at the outset – shopping for sandals and registering for china and gifts for her wedding. Her online shopping "trip" resembled a roller-coaster ride. She switched rapidly between three different Internet Explorer windows, and was able to shop for a variety of items concurrently. Let us follow the sequence of actions in the second Explorer window.

A hierarchical-sequential structure could be discerned. Before plunging into individual stores, she tried to obtain a more extensive list of china registries by using the search string 'china registry': *"So then here I was gonna go to Google and search for just china patterns in general just to see if they have a new site that I wasn't aware of, that I hadn't seen."* Instantly however, an action-monitoring cognition occurred: *"But I did immediately think this is gonna give me all sorts of stuff about the country China, not china china"*. Her attention processes were mainly directed towards assessing how each website was relevant to her needs, and whether the products met her criteria. Action-monitoring cognitions were clearly in evidence as she repeatedly clicked on different search results and assessed their relevance to her goal of locating suitable china registries.

Due to her need to concurrently manage activities in three different Explorer windows, her attention processes were on alert. Action-steering cognitions constantly occurred to guide her actions in each window. Action-accompanying cognitions also arose in response to the different products which she viewed. As she was shopping for

things relating to her wedding, selecting the right products obviously meant quite a lot to her. Therefore, a large proportion of her action-accompanying cognitions were emotions which were awakened in response to her like or dislike of the products. Consider this action-accompanying cognition which arose in response to the launching of the Crate and Barrel website:

> *"I loved the picture, it totally responded to me and, especially with wedding stuff, like a lot of wedding websites seem like extremely cheesy and so I always feel much more comfortable with a store like Crate and Barrel where it's like, I know it's great stuff, I know what it is and I think that that was reiterated when I saw it. It's like, 'Yes, that's much more my style than the other website.' I mean just the look of it was much more appealing."*

As was seen in the case of Kevin, emotions have an energising process and this was evident in Elaine's case as well. In her case, the positive emotions stimulated by the online store energised her into registering at the store. This is in contrast to Kevin whose negative emotions of frustration led him to think of alternative ways to fulfil his goals.

Dispositions

Elaine's actions have clearly been influenced by her disposition of store loyalty: *"I'm very brand loyal with my online shopping. Much more so than in real shopping."* It is precisely her "brand loyalty" which leads her to visit and revisit specific online stores, resulting in a process of routinising her actions and conditioning automaticity.

Elaine finds online shopping much more relaxing than regular shopping and often uses it as a diversion. She admitted to shopping online for the pure enjoyment of it but was unable to shop online for more than half an hour each time:

> *"I think yes but there's definitely a time limit to it. Like I can't, I definitely can't shop, just sit down and shop for more than a half hour. Usually it's more like probably fifteen or twenty minutes and something will stall or something will happen and I'll need to get up and answer the door. So I'm easily distracted."*

She also has few concerns about the privacy implications of personalisation software such as cookies which track consumers and their identities. She appreciates it when an online store greets her by name and feels a sense of welcome:

> *"... they are all becoming sophisticated with...they can say welcome Elaine. You know they all recognise me and identify me and I do feel sort of a sense of home like I understand this website, it's very easy... It definitely gives me a sense of, 'Oh this is my store. They know me.'(Laughs) I like it."*

Nonetheless, she does have occasional bouts of suspicion about these online stores' tracking of consumers' activities:

> *"...in the back of my mind, sometimes I get a little worried about like are they gauging these prices based on my past behaviour ...like part of me really enjoys how they can customise things based on what I've bought before and part of me thinks, am I gonna get screwed? Is there any way they could be like upping their prices or not showing everything because of preferences?"*

It is interesting to note that even with enthusiastic online shoppers, security concerns still arise, perhaps because of the Big Brother image of computer-related tracking software.

3.6 MULTI-TASKING STRUCTURE

Susan's multi-tasking action structure will be analysed to understand how actors manage different genres of activities at the same time. Her action structure also shows how she uses multiple action routes to fulfil one main goal – to locate CDs by a particular singer.

Background

Susan is a jewellery designer who works from home. Since she mostly works from home, she finds online shopping convenient. At the same time though, she realises that online shopping can be time consuming because one can while the day away just browsing for different items. As a result, she is careful not to take too much time shopping online:

> *"You can waste your entire life browsing for things on the web and following links to more interesting things so I try not to do that...it's so easy to waste hours and because I work at home a lot. You know it's very easy for me to decide, 'Oh I'll browse online for a while and I'll look up something.' And then the day is gone and I would have looked up three different things and there's so much interesting stuff there."*

She also multi-tasks online as she shops, often checking her email.

She uses online shopping for buying specific items. Since her interests are esoteric, she is often unable to find books on topics such as medieval dance in the brick-and-mortar stores. For such items, she uses online shopping instead:

> *"But you know it [online shopping] saves me time, it saves me hassle... because my research involves things like historic dance, a lot of the books I look for, the material I look for, I can't get it. I can't just go to the bookstore and get it...when I don't know what I want, when I just want to get a book, I would just go to a normal bookstore so then I can just go up and down looking at all the books and then find something. But if I want a particular thing, I'd much rather get it on the net because it will be faster. And the bookstores never have what I want. They tend to be unusual or out-of-print or hard to find."*

Susan has had experience with website design including designing a website for promoting her own jewellery designs. As a result, she is often assessing the usability of websites while she shops online and feels aggravated when she comes across poorly designed websites.

Action structure

Susan began her online shopping by opening two Explorer windows to concurrently look up her CD: *"I decided that one menu wasn't enough. I got into the Explorer icon down there to start, so I opened up a second window."* From there, her actions took on a planned and hierarchical-sequential pattern. On one window, she immediately logged onto www.google.com and keyed in a search string to search for CDs by a particular singer. While waiting for the search results to be generated, she switched to the other window and logged onto www.amazon.com, and proceeded to search for similar CDs on that site. This practice of switching between windows was a regular habit and had become somewhat automatic, as in the case of Elaine:

> *"I look back and forth online because my machine is slow, it might take a minute for you know the search to come through so I would flip back to another site and look at what had happened there."*

Her attention processes were clearly directed towards assessing how each website was relevant to her needs, ascertaining whether the products met her criteria and monitoring the activities on the different windows. When she entered a CD retail site which offered a long list of available CDs, she started sampling: *"...I jumped on Live at*

the Iron Horse because I've gone to a lot of concerts there and I wasn't looking too...really closely." This "picking behaviour" appeared to be in response to the deluge of information she was presented with. Furthermore, the information was presented in a manner that prevented her from making reasoned decisions, i.e. a listing of CD titles with no descriptions or images that could aid selection.

Despite the fact that at one point, Susan had to manage two Explorer windows, one Realplayer window and one Telnet window, she did not lose track of what she was doing in each window. This was largely due to the speed of her actions. Towards the end, Susan read the song lyrics in one window while playing the song in another window. Her route network was therefore complex as she arrived at a singular goal using a multiplicity of routes. Figure 3.5 is a diagrammatic representation of a multi-tasking action structure involving a multiplicity of routes directed at fulfilling a singular goal.

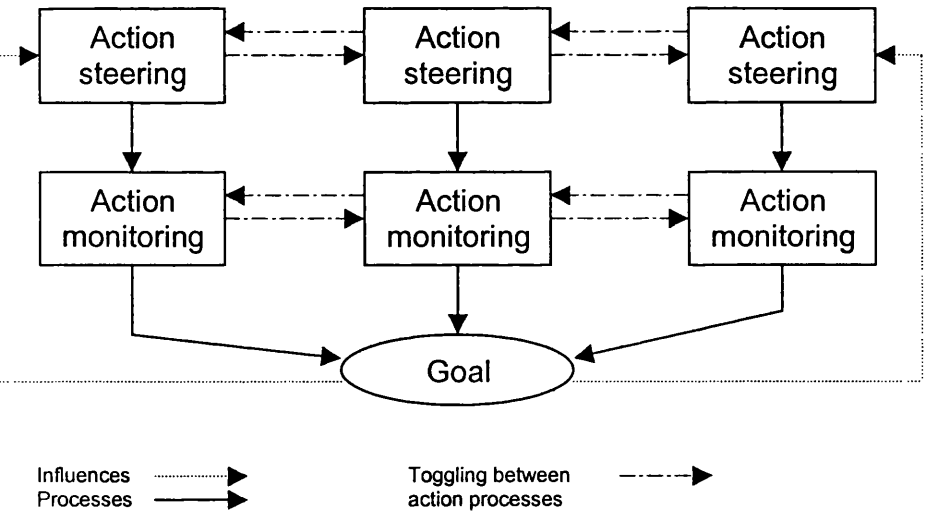


Figure 3.5 Diagrammatic representation of multi-tasking action structure

Dispositions

Susan is essentially an Internet savvy shopper who at the same time, does not wish to give up some of the benefits of conventional shopping. While she detests clothes shopping in brick-and-mortar stores, she enjoys going to bookstores and music stores just to browse.

Online, she is vigilant about protecting her privacy and takes safeguards such as having her online purchases delivered to a P.O. Box and withholds her phone number from online stores. However she makes occasional exceptions for the sake of convenience:

> *"I left Amazon's cookies on...because I shop with them so much it really is efficient with the one-click shopping. Overall I'm not very happy with cookies and when people ask me, when the site asks if they can put in a cookie I will refuse the cookie. And I do clear them occasionally and I get annoyed with sites that put the cookies on without bothering to mention it. Amazon's I tolerate but I'm not too happy about it."*

She has also assured herself of the fact that her credit card liability is low even if misappropriation of her financial details occurs:

> *"I was worried at first about using my credit card on the Internet but I looked into it a little and it doesn't seem like there was very much liability. I try not to be paranoid, you know, one little bit of information on the Internet. I can't imagine any body would be looking that closely ...The standard I think is that you only have $50 worth of liability with a stolen card number anyway so that doesn't seem like a huge risk to take. And you know I love the convenience."*

Susan's concerns for the security of online shopping transactions are outweighed by its convenience to the extent that she is willing pay slightly more money just to enjoy the convenience. At the same time, she declares that:

> *"I don't shop online for the pure enjoyment of it though. I'm too goal-oriented. I shop online to get what I need to get."*

3.7 KNOWLEDGE-DRIVEN STRUCTURE

In Glen's action structure, one can detect the significant influence which relevant knowledge has on online shopping actions. All actions require some level of knowledge. However, Glen's actions are noteworthy because they utilised a wide body of sophisticated knowledge which is beyond that of the average online shopper. Glen possesses comprehensive knowledge about different websites and their range of products, product pricing policies, special promotions as well as technical knowledge on the design and function of websites. From Glen's action structure, it can be seen that without such

knowledge, the average consumer would encounter considerable difficulties or obstacles when shopping online for plane tickets.

Background

Glen, who is between 21 to 25, is a graduate student who works part-time as a computer services assistant at the university. Not surprisingly, he is extremely comfortable with computer technology and online shopping. He owns a car and is therefore not dependent on online shopping for his shopping needs but nonetheless chooses to shop online to enjoy convenience and accessibility:

> *"...where I work, I'm always in contact with computers, at least once a day and so I'm always checking email and by that nature I might surf through stores if it crosses my mind just because it's easily accessible like that. Whereas here [at home] if I felt like getting a book, I have to go to the garage, get out my car, drive to the bookstore, just to look, whereas here [points to computer], in minutes I can look at it and 'Oh it's too expensive, I don't want it.' It's become so second nature because it's so accessible."*

He usually buys books and plane tickets online but is reluctant to buy experience goods such as clothing:

> *"...if it's certain items like clothes, I would rarely ever buy clothes online simply because I've had experiences where clothes don't fit or it's something I want to look at, I want to see the material. I'm not one of those people that can imagine polyester or something. I can't do that. They can alter pictures, you know ... it might look great online and then you go to the store and you think, 'one shade lighter and it's something you don't want'."*

Action structure

During the interview, Glen shopped for airline tickets. He was open-minded about where the airline ticket would take him to as he was keen to travel. His goal was therefore a flexible one. Let us analyse Glen's action structure which was evidently of a hierarchical-sequential and goal-directed nature. What is remarkable about his online shopping action structure is that his comprehensive knowledge greatly affects his actions. His two key criteria for ticket selection were a low price and a flight time which did not entail travelling through the rush hour. Glen therefore began with a fixed goal of researching ticket prices but the ticket destination was a varying goal. He was open to

different options. Some degree of planning was also displayed in how he commenced his information search. A hierarchical-sequential structure was evident in his actions. He began by using a travel website to get an idea of the general price ranges of the airplane tickets he was interested in:

> *"...if I'm not familiar with the airfare for that particular occasion at the particular time, then I start here to get a sense of what should I expect, how much about is it. Of course this site doesn't always offer the best prices. It rarely does actually. So I just came here to get an idea of how much it is."*

In accordance with his goal of obtaining a cheap ticket, his actions were clearly goal-directed in each travel website that he surfed. He would zero in very quickly on special deals, bypassing all other options.

At the very outset of his shopping action, his comprehensive knowledge of ticket pricing policies helped to direct his actions:

> *"So that's Chicago to, oh no, I changed it to Los Angeles to Singapore because sometimes it's cheaper to consider closer ports, there's more flights from Los Angeles to Singapore and then to get from Chicago to Los Angeles is pretty easy."*

His knowledge also made him a better judge of purportedly special deals:

> *"I wasn't like 'oh my god, 639 dollars!'. I was hoping for something different. I was hoping if it said Singapore Airlines then...that would be...a better result or like United or something that I'm more familiar with than Korean Airlines. It's not a bad airline but they're known to be a low cost international airline and those airfare quotes are too good to be true so I wouldn't go by that."*

More will be said about the influence Glen's which knowledge has on his actions in the next section on dispositions.

Action steering cognitions arose regularly throughout his online shopping. this was due principally to the fact that the interfaces he used were constantly prompting him for information on his travel details such as the preferred travel dates and times, class of travel etc. The goal-directed nature of his actions was therefore imposed to some extent by the design of the interface. Furthermore, some websites would prompt him for his account numbers and passwords before granting him access. Such prompts naturally

awakened his attention and memory processes as well. The information provided by the websites was also text-based rather than graphical so Glen was required to constantly read through the options and this also demanded his attention. At the same time, due to his familiarity with these websites, he could navigate them from memory, clicking quickly on different buttons and links without having to first figure out their locations on the websites or the purposes which they served. From the results of the self-administered questionnaire, Glen was classified as a state-oriented interviewee. However, this was not obvious from his actions as he had a varying goal and was therefore prone to looking at a range of options instead of adhering to a fixed agenda.

Dispositions

Glen possesses a great deal of expert knowledge on shopping for airline tickets. First, he had a good knowledge of which airlines are more reputable. Second, he had a sound understanding of how airline ticket pricing works so that he knew how to exploit the system to his advantage. Third, he was in tune with the special deals on different airline tickets websites and could use this knowledge to his advantage when he shopped around for tickets. Fourth, he had a in-depth understanding of web design.

In one instance, he realised that the hyperlinks which he clicked on did not launch the correct website as stated in the link. He then began to read the bar at the bottom of the computer screen to decipher the programming codes for each hyperlink, to check if there was a mistake in correlating the hyperlinks with the webpages:

> *"...when you run your cursor over the link, on the very bottom it will show you the address or what's programmed when you click on that link. And I was comparing well maybe it was a programming error and that happens where this link is a mistake and it led to the one above which is the Florida fling...if I go somewhere and the link doesn't work then I examine the webpage address where it goes, maybe there's a typo and if it's easily fixed then you can just type in whatever and it will bring you where it is. It's just that whoever was programming the website had problems."*

As can be seen from the above paragraph, Glen had a great deal of in-depth knowledge about the technical aspects of the World Wide Web. Due to his heightened

knowledge of computers and the Internet, he is careful about using online services such as customer reviews:

> *"...there's also an incentive system behind that where the more reviews you make, they actually reward you, and the more people would read your reviews... So it's, that's what I have to consider. A lot of reviews are written like that 'Oh this product is great' but it's all empty comments and it's evidenced by...you know there's that little line 'X number of Y people found your comment to be helpful' and usually the empty reviews have '0 people out of 20 people found this item to be helpful'".*

He also prefers not to use search engines to locate stores or products because *"that's easily programmed. It's very much, it's not a natural way of selection when they give you those lists of stores".*

Glen admitted to finding online shopping entertaining and appears to have experienced flow in online shopping. In response to the statement "I get so involved when I shop online that I forget everything else." His response was:

> *"That's true, especially if there's something good, if there's a bargain. If it's a true bargain and not a false sense of enjoyment. Yeah, I'm very distracted, I forget everything else, especially my homework, especially my thesis, and if it's so important that it becomes a priority, it'll become a priority for me to put an end to the matter and that becomes buying it or not buying it...some sort of resolution. It becomes extremely important especially if it is time-sanctioned which is usually the case. The deals don't last forever which adds even more pressure and so yeah, I do tend to get very much wrapped up in that."*

3.8 CONCLUSION

This chapter identified and analysed different types of online shopping action structures: (i) state-oriented, varying goal, (ii) action-oriented, varying goal, (iii) state-oriented, fixed goal, (iv) action-oriented, fixed goal, (v) routine (vi) multi-tasking, (vii) knowledge-driven. The action structures of each of type, and the dispositions and background of its actors were also discussed.

This qualitative analysis of online shopping actions has demonstrated that they are influenced by a host of inter-related structural, cognitive and dispositional dimensions. The next chapter will take a broad view by studying all of the interviewees' online

shopping actions to discern any trends and commonalities with regard to their structural, cognitive and dispositional dimensions.

4 KEY DIMENSIONS OF ONLINE SHOPPING ACTIONS

This chapter begins with a broad analysis of the action structures of all of the interviewees to detect behavioural patterns and structural commonalities. With this macro-perspective, a discussion will be conducted on how the structural, cognitive and dispositional elements of online shopping actions inter-relate. The effects which situational variables, such as interface design and the nature of the World Wide Web, have on online shopping structures will also be assessed. Comparisons will also be made between online shopping actions and conventional shopping actions to illustrate the effects of technological mediation on people's actions. The implications which the findings on online shopping actions have on our understanding of online behaviour in general will also be discussed. As the theory of activity and goal-directed action has not hitherto been applied to the study of online actions, the implications which the research findings have for the development of the theory will also be highlighted.

4.1 STRUCTURE OF ONLINE SHOPPING ACTIONS

Most online shopping actions have clear and well-defined defined structures both in terms of the course of the action and their levels of organisation. Let us look at each of these structural features in detail. An action has both a starting and an end point and is composed of action steps with different steps linked at intersections (Cranach, Kalbermatten et al. 1982). In actions which are goal-directed, the different courses of action between the same starting and end point form a route network. Each course of action is geared towards fulfilling a particular goal or sub-goal. In this regard, online shopping actions are no exception, they are often goal-directed and comprise a multiplicity of action steps.

4.1.1 Imposed goal-directedness

Most of the interviewees displayed deliberate search behaviour. They were not casual in their approach but were clearly purpose-driven. While it cannot be ruled out that their deliberate search behaviour was due to the interview situation where they were "assigned" a task to perform, consumer surveys show that Internet users *are* predominantly purpose-driven in their online behaviour (Jupiter Media Metrix and NPD

2001). Almost all of the interviewees' online shopping actions were goal-directed and of a hierarchical sequential nature, regardless of whether they were state- or action-oriented. This is mainly due to the fact that the Internet is a "pull" medium where the user has to actively select which websites to view. This is unlike the "push" medium of television where the viewer is forced to watch a limited number of channels according to a pre-determined schedule:

> *"...for me it's much more entertaining than television because I control it and I can go where I want to go when I need to go."* Elaine

In online shopping, the consumer is in the "driver's seat" and has no choice but to be goal-directed and purpose-driven.

Even within specific websites, the interviewees' actions were similarly goal-directed. Again, this goal-directed nature is "imposed" on the consumer by the interface as he/she is made to go through a linear process of narrowing down the number of options which he/she has to consider in progressive stages. For example, many online stores require consumers to first select a product category and then to key in specific information on products within this category before they present a list of available merchandise. From this list, the consumer can choose to shortlist the products or services based on price, brand, colour or other relevant criteria. In this sense, the online environment plays a determinant role in influencing the nature of the actions. One could therefore argue that the nature of the Internet and the design of the online shopping interface encourages the online shopper to be goal-directed.

4.1.2 Effects of hypertextual structures

While the nature of the Internet as a "pull" medium affects the goal-directedness of online shopping actions, the hypertextual nature of the Internet influences the complexity of online shopping actions. In essence, the Internet user can navigate his way through the World Wide Web in three ways: keying in the URL of a website that he/she already knows about, scrolling through a single document or following a hypertext link (Jackson 1997). In spite of this limited number of navigational means, the "affordances" of the World Wide Web enable online shoppers to take complicated and dynamic courses

of action (Norman 1998, pp. 123 - 126). This is mainly because the World Wide Web is a "decentralised network of hyperlinked, multimedia objects" (Weare and Lin 2000) where the interconnected hyperlinks are not organised in a unitary format. Instead, each hyperlink can link to other hyperlinks in myriad ways.

As a result, the "'shackles' of linearity" have been shed (Newhagen and Rafaeli 1996, p. 2). These hypertextual structures affect thought processes, giving rise to a non-linear or multi-linear progression of ideas (Jackson 1997). This has repercussions on how Internet users surf the Web and on how consumers use the Internet for online shopping. Online shoppers can easily jump from one hyperlink to another in no particular order as the "tyranny of author over reader" has been overthrown (Weare and Lin 2000).

In the case of the online shopping actions studied, there was clear evidence of the dynamic nature of online shoppers' route networks - the different courses of action between the same starting and end point. Online shopping actions seem to be "complex actions [which] show manifold nested structures" (Cranach, Machler et al. 1985, p. 28). For example, Susan began her product search by using a search engine. She then studied several hyperlinks suggested by the search engine. However, when she tired of that, she directly keyed in the URL of another store that she knew of. In so doing, she easily extricated himself from one network of hyperlinks – that suggested by the search engine – and entered another network of hyperlinks – that of the alternative retail site.

The conventional shopper is much less empowered in that respect. He/She has to contend with the "destiny of geography" because once he/she has entered a particular store to peruse the products, the ease with which he/she can widen his/her product search depends on the proximity of an alternative store. He/She has to balance the gains of widening his/her product search, i.e. increased product range, against the costs of doing so, i.e. time and money spent travelling to alternative stores. For the online shopper, the costs of widening his/her product search are marginal. In the case of Elaine, not only did she visit different online retail sites, she visited them simultaneously. This was made possible by the fact that she opened two Internet browser windows to log onto two retail sites at the same time. This allowed her to compare products and prices easily and

swiftly. Needless to say, visiting two brick-and-mortar stores simultaneously is impossible.

4.1.3 Hierarchical-sequential structure

Cranach (1982) argued that actions are executed according to a goal structure comprising supergoals, concrete action goals and sub-goals which are hierarchically and sequentially ordered. Although the World Wide Web facilitates the viewing of hyperlinks in no particular order, a hierarchical-sequential course of action was nonetheless clearly discernable in most of the actions studied.

Indeed, some commonly-used features of the World Wide Web, particularly search engines, help to facilitate a hierarchical-sequential course of action. A recent survey shows that 81 per cent of Internet users locate the websites which they require through search engines (Jupiter Communications 2001). Indeed, most of the interviewees' actions were hierarchical-sequential, where they utilised search engines to locate products and services using their most important criteria, followed by a narrowing down of products based on secondary criteria and so on. For example, Nicole first identified the sewing machines which had the features she required, before narrowing down the selection using her price considerations.

One might argue that all day-to-day actions have a hierarchical-sequential structure. But this hierarchical-sequential structure is even more pronounced in online actions because of the nature of the World Wide Web. Unlike conventional shoppers who have to stroll through aisles to view entire product ranges, online shoppers can progressively limit the range of products they need to consider by using primary criteria, followed by secondary criteria and so on:

> *"When I'm online, I usually have an agenda like shoes. And I'll go and I'll start there and often I'll take off in a different direction but like I have a reason that I open the window in the first place. When I go shopping in a store it's very often I'm just gonna go and I'll need some things and I'll just see what's available. And definitely at this point I usually go in and very slowly sort of walk around and I like to take all the front of the store, and look at everything and usually head to the back where there are sales and that's more where I pick up things to try on.*

Whereas online, I definitely don't look at the whole site and see what everything is. I'm just sort of more focused on like this stream of thought." Elaine

"I like the interface, it lets you define exactly what you want out of the camera or you could go back and leave everything empty and come back with a whole list." Joe

4.1.4 Interactivity and bidirectional adaptation

Yet another characteristic of the Internet has made online shoppers' actions more complicated – its interactivity. "An interactive medium is one that can reach out to a consumer, collect a response, and then, in the defining step, reach out again with a new message whose content takes account of the response" (Xenikou, Hammond et al. 2000). Due to the introduction of intelligent agents such as "applets" and "cookies", websites are able to respond to users in an interactive manner (Ansari, Essegaier et al. 2000). For example, when someone conducts an online search for rental cars using a search engine, the advertisement section of the search engine will feature advertisements on car rental companies in order to attract the user or to distract him from his task. The Web environment is thus mercurial and reactive, changing to fulfil what it perceives to be the needs of its user.

The theory of activity and goal-directed action assumes the existence of bidirectional adaptation in action, where action is directed towards meeting the actor's internal needs and towards fulfilling the demands of the actor's external environment (Cranach, Machler et al. 1985). In this regard, the online shopper is in a starkly different environment from the conventional shopper. The conventional shopper is in a mostly static retail environment. If he/she realises a need for a particular product, the brick-and-mortar store is unable to respond by placing that product in the consumer's line of vision unless there is a perceptive store assistant about.

In contrast, the online store is different because it is well aware of the online shopper's needs based on data the shopper has entered, and can adapt itself to meet those needs. Unlike the brick-and-mortar store assistant, it does not need to *perceive* those needs as it knows them up front. There is thus bidirectional adaptation on both the part of the actor and the environment - in this case the interactive online environment. This point

was demonstrated in the actions of Gabrielle. She had initially set out to shop for a CD by a particular musician on amazon.com. However, the amazon.com interface proceeded to suggest other CD titles by this musician and these suggestions led Gabrielle to consider purchasing a CD which she had not hitherto heard of. She thus responded to the change in the environment and to her internal (albeit induced) need for the second CD. The online store interface then becomes the actor's accomplice in fulfilling his goals, rather than serving merely as the interacting party. It is an inanimate yet "intelligent" agent which can aid the actor in fulfilling his latent rather than manifest goals. It can even help to generate new goals for the actor, as in the case of Gabrielle.

4.1.5 Multi-tasking online and multi-tasking offline

Online shopping also allows consumers to multi-task. Many of the interviewees either multi-tasked online, e.g. checking email and conducting an online chat, or multi-tasked offline, e.g. cooking, eating and reading a magazine or did a combination of both. This made their online shopping actions more complex with more complicated route networks.

In a study on children in digital multi-media environments, Rushkoff speculated that while such children have a shorter attention span, they have a broader "attention range" where they are able to multi-task and do many things at the same time and do them well (1999, p. 50). He attributes this ability to multi-task to a capacity for processing and absorbing visual information rapidly. Recent research however shows that multi-tasking results in lower efficiency because of task switching costs (Rubinstein, Meyer et al. 2001). In carrying out actions, a rule activation stage occurs where the individual has to enable the rules for that particular task. In carrying out multiple actions, the individual has to disable the rules for one task before enabling the rules for another task. Switching from familiar to unfamiliar tasks takes more time than the reverse situation because rules for familiar tasks take longer to be disabled. These switching costs increase with task complexity.

The three interviewees who did multi-task, i.e. Elaine, Nicole and Susan multi-tasked online wherein they checked email while they shopped online or they shopped in

two online stores for two different things simultaneously. In all three cases, they were familiar not just with the online stores where they shopped but also with the email interfaces which they used regularly. As a result, task switching costs were probably reduced. However, in a situation where the online shopper surfs a new online store which he/she is not familiar with while he/she checks his email, task switching costs are likely to increase and productivity will be reduced. Interestingly though, the interviewees were led to multi-task because they wanted to productively utilise the time which they spent waiting for websites to download. As a consequence, while waiting for one website to download, they would log on to other websites. In light of the recent research, multi-tasking may actually be lowering the efficiency of these online shoppers rather than increasing them as the shoppers believe.

4.2 GOAL GENERATION

Goal generation involves coding the anticipated end-state of an action into an internal, mental representation (Hacker 1982; Hacker 1982). These goals serve as a motivation for the actor to complete his action. Goal generation processes occurred in online shoppers as well, although there is a distinction to be made between online shoppers who tend to have fixed goals and those who tend to have varying goals.

4.2.1 Fixed/Varying goals

In roughly two thirds of the online shoppers studied, their goals remained relatively fixed. They began their online shopping "trips" with fixed agenda, and once these items on the agenda were fulfilled, their online shopping came to a halt. Not surprisingly, such shoppers tended to be more action-oriented. The remaining one third of the shoppers tended to have varying goals or tended towards goal divergence. Such behaviour can be attributed to the state-orientation of the shoppers, but can also be attributed to the nature of the online retail environment as well.

In an online retail environment, the dynamism and multifarious possibilities offered by the hypertextual World Wide Web environment can induce the occurrence of goal divergence. The actor begins with a particular goal but in the process of fulfilling this goal, he/she is diverted and starts to engage in other unplanned activities. Goal

divergence thus occurs. Take the example of Kevin. He started off by looking for a video game. Along the way, he was presented with a host of accessories related to videogames including cables and stands. He therefore diverged from his original goal constantly. This is less likely to occur in a regular retail environment because the consumer is constrained by the physical parameters of a brick-and-mortar store. The videogames are likely to be in the videogame and computer software section, while the videogame accessories are likely to be in electrical appliance section. The two sections may even be side by side but the consumer still has to make the extra effort to browse both sections. The online store has no such physical constraints. When an online shopper shops for an item in one section, the interface can proceed to suggest items in any number of sections, regardless of whether the items are related or not. Many online stores suggest other items with a "You may also like..." link which leads to a variety of things, related or unrelated to what the online shopper is shopping for at that moment. Since the online shopper does not need to expend much energy when clicking on links to other sections of a website as compared to walking to other departments in a brick-and-mortar store, he/she is likely to explore the website and as a result, goal divergence occurs:

> *"Like what happens online is I'll start shopping for something specific, and then maybe I don't find it or maybe I find a link to something else, and I get completely in a different category with maybe two things that you might not necessarily find in the same store and end up buying something else."* Gabrielle

Varying goals are also more likely to occur in an online environment. Let us consider goal generation in a regular retail environment. In such circumstances, the consumer knows that his/her options within a particular shopping mall are finite given the fixed number of stores available, e.g. buy food from the supermarket, check out the price of a refrigerator at the appliance store, stop by the post office to drop off a parcel. His/Her goal generation processes are therefore likely to occur mostly at the beginning of his/her shopping trip, when he/she plans his/her actions for the period of time in which he/she is at the mall, in view of his/her tasks and the store layout. His/Her goals are likely to remain relatively fixed.

In online shopping, goal generation can occur at the beginning and even throughout an online shopping "trip". This is due to the multitude of possibilities in the

online retail environment and the minimisation of physical or temporal constraints on his actions:

> *"...it is much easier to look for the things that you want on a website because you know exactly where to go. And you click on this and you click on that and you don't have to walk all the way to the other side of the store and you click to go back or you click on another link and all of a sudden right there you see the pictures."* Ian

As a result, the consumer does not need to plan his/her actions at the outset, but can plan them as he/she goes along with goal generation occurring along the way. Every online store is but a few clicks away. Take the example of Nicole. She commenced her online shopping with the goal of buying a sewing machine. After she had satisfied that goal, she proceeded to browse four other online stores including a gift shop, a stationery store, an exotic accessory shop and a shoe shop. Consider how Nicole's actions may have differed in a brick-and-mortar store. If she were at the sewing machine shop when she contemplated purchasing some stationery, her memory processes may have informed her that the stationery store was at the opposite end of the mall, far from where she had parked her car. Consequently, the goal generation process of deciding to go to the stationery shop would not have occurred. The logistical requirements for her actions and the physical constraints against them would have suppressed any goal generation tendencies. One can therefore argue that the propensity towards having varying goals is greater in the online retail environment than in a brick-and-mortar store.

4.2.2 Goal deferment

An interesting subset of goal generation activity was noted in online shopping - goal deferment. In online shopping, the costs of visiting and revisiting a store are negligible. One need only click on the hyperlink from the comfort of one's home or office. The online shopper has the assurance that he/she can fulfil his/her desires at a later time, when he feels ready to do so. He then defers the fulfilment of the goal till later. What makes the Internet an even more an unusual shopping "venue" is that the consumer can actually "rehearse" his/her purchases and carry out a shopping transaction to its penultimate stage, just one step short of the final purchase. This "rehearsal" enables the

consumer to mentally prepare him/herself for the ultimate purchase and to consider more thoroughly whether he/she wishes to make that final act of purchase or not:

> *"Like, I think there are probably three or four times where I've ended up buying something, I've gotten very close to buying that...like all I had to do was click 'send' and something's happened to make me stop and then I'll go back in a day or two and try it again...or just my saying, 'Why don't I wait and if I still want those tomorrow I'll go look for it' and sort of like monitoring myself and making sure it's not just 'Oh it's so easy, I'll just go and buy it'. When I wake up in the morning, is this what I'm gonna be thinking about or am I gonna have totally moved on?"* Elaine

The conventional shopper can do likewise but would find the effort required to revisit a store, repeatedly study the same product *and* face the same sales assistants daunting. This opportunity for goal deferment and for "rehearsing" a purchase is perhaps unique to the online shopper. Goal deferment is possibly linked to impulse purchases which will be discussed in Chapter 5.

4.3 Goal Enactment and Attention Processes

The theory of activity and goal-directed action assumes that in the course of an action, attention processes which steer, monitor, accompany and justify actions occur (Hacker 1985). These processes are involved in the task of goal enactment and arise in the form of cognitions. All of these cognitive processes appear to be in evidence in online shopping actions. The significance of each set of processes in online shopping is discussed as follows.

4.3.1 Typical action-related cognitions in online shopping

Online shopping appears to be a mentally intense activity. In conventional shopping, the consumer can wander through a store by simply following his/her senses, guided by what he/she sees, smells or hears. He/She need not be fully conscious of what he/she is looking at or of where he/she is going. Often, in a mall which one is familiar with, one simply strolls into a particular store out of habit. Similarly, one can also be drawn to a particular section of the mall because one smells the aroma of fresh bread emanating from there. In online shopping, the consumer can "wander" virtually through a store as well. The consumer can click on an eye-catching banner advertisement or on a

hyperlink promoting a special deal. However, the prevailing designs of most online store interfaces require consumers to make clear choices of which product categories they want to view, the specific products that they intend to buy, the information which they wish to peruse and so on. Again, this is a function of the World Wide Web as a "pull" medium.

Given that the online shopper is frequently queried by the interface on what he/she wants, his/her mental processes are constantly awakened in response to such prompts. Action-related cognitions therefore arise at a high frequency. Table 4.1 summarises the different action-related cognitions which occur in online shopping. It should be noted that while the cognition types listed are unitary, what tends to happen during online shopping actions is the occurrence of hybrid cognitions which are combinations of two or more cognition types. For example, a cognition can be both action-steering and action-monitoring:

Table 4.1 Action-related cognitions in online shopping

Goal generation	Cognition which actively states an objective to be fulfilled through goal-directed action
Goal enactment ▪ Action steering ▪ Action monitoring	 Cognition which actively and definitively directs/initiates new actions Cognition which assesses the results of the previous action
Action accompanying	Cognition which does not direct action but which occurs in response to or as a result of an action. (Emotions are a particularly important subset of action accompanying cognitions)
Goal protection	Cognition which actively rules out alternative goal fulfilment and maintains an adherence to the original goal(s)
Memory	Mental representation which helps the actor to recall how to act in a particular circumstance, environment or situation. When this mental representation is utilised by the actor, it is drawn into the actor's consciousness and becomes a cognition

4.3.2 Action steering and action monitoring processes

Action steering processes occur whenever there are decisions to be made on the course of action to take, or an uncertainty in the course of the action. An actor pays attention to an action because special difficulties arise and his/her cognition becomes conscious so as to organise the action (Cranach, Kalbermatten et al. 1982). In the absence of difficulties, action-related cognitions can remain subconscious.

Action steering processes seem to occur with great frequency in online shopping. This is possibly due to the hyperlinked nature of the World Wide Web where the online shopper's possible route network can be rather complicated (as discussed in Section 4.3). Websites frequently offer many hyperlinks on each web page. Therefore, an online shopping act can involve many alternative courses of action. Furthermore, each alternative course of action can be attempted or abandoned easily. The World Wide Web allows the user to abandon any website he/she is currently surfing to go to another website that he/she wishes to surf instead. All these activities require action steering processes to set them in motion. Joe for example could not find the information which he/she required in one website and simply switched to another website with its own set of hyperlinks, rather than restricting him/herself to the website he/she was on and the hyperlinks which it offered.

Action monitoring processes also occur to carry out "checking" - a feedback process whereby actions are designed and modified in order to achieve the desired results (Hacker 1985, p. 69). The close association of action steering and action monitoring cognitions corresponds to Norman's (1988) execution-evaluation cycle in human computer interactions. Pam for example was relentless in her search for a wall mirror. She clicked on particular sections of the website and assessed the results of her action before clicking on other sections to locate the product. Checking occurred especially in the use of search engines. Users input a search string and assess the output of the search results to see the extent to which these results meet their search criteria and goals. This was clearly demonstrated in the online shopping actions of interviewees Jan and Kevin. When their search strings did not produce the desired results, they amended their search strings in order to obtain more accurate and relevant results. Their actions were obviously guided by action-monitoring cognitions which alerted them to the fact that their exact goals were not being achieved.

4.3.3 Information overload

It is also important to consider the problem of information overload in the online environment, and how it affects goal enactment and attention processes. Online shopping is a mentally intense process where the online shopper's attention is "monopolised" by

the Web interface. The sheer volume of information that the online shopper has to process, the constant changes in the online environment and the large number of alternative action steps that he/she has to choose from demands that his/her mental processes are principally dedicated to directing his/her actions.

It has been argued that the difficulty of a consumer's decision-making is a function of the dimensions of the task and the presentation of information in the environment (Bettman, Johnson et al. 1991). A limited cognitive capacity then results in the consideration of rather limited product attributes, despite the wealth of information available (Bruner, Goodnow et al. 1959). This is especially true of the Internet environment where the problem of "information overload" exists (Jordan 1999, p. 101). Jordan argued that information overload can occur in two ways. First, there can be situations where there is just too much information for the reader to absorb. Second, information can be so badly organised that finding a specific piece of information becomes impossible:

> *"Browsing and seeing anything interesting on the Net is almost a losing proposition. You either find too much that's interesting or too little that's interesting and you just keep going forever. On a catalogue you can flip through the whole thing and if it's interesting you mark it. If it's not interesting you throw it away. The Net is like an endless pit of interesting and uninteresting things. So I don't tend to browse through it because it's looking for needles in haystacks."*
> Susan

Ironically, the problem of information overload has been aggravated by the introduction of information management tools such as search engines which are supposed to retrieve and organise information in a useful manner (Jordan 1999). However, the net result is that these information management tools generate even more information for the user because gaining relevant information becomes increasingly efficient. At the same time, the mental processing capability of consumers is a scarce resource which is strained by an overwhelming amount of information (Simon 1978). This problem of information overload is exacerbated by the fact that reading from a computer screen is about 25 per cent slower than reading from paper and as a result, people are less inclined to read copious amounts of text on the computer screen (Nielsen 2000).

This phenomenon of information overload has definite implications for online shoppers. Many of the interviewees did not look beyond the first page of the search engine results despite having been offered numerous pages of results to sieve through:

> *"...like probably almost every other Internet shopper, I don't go more than 20 or 40 hits down the line. If somebody's at number 80, I'll never see him because I'll never click that far which probably, well I mean you just don't have time to do all that clicking. But the best guy might be down at number 92. Then I'll never get there because that's the way it is."* Tom

4.3.4 Picking behaviour

The multi-layered nature of the World Wide Web offers the online shopper with a great degree of choice and this translates into the frequent occurrence of intersection points where divergent action steps are offered. However, this frequent occurrence of intersection points appears to inflict stress on online shoppers as they are constantly expected to make decisions on which action steps they wish to take. This results in "picking behaviour", where consumers make their selections on a whim or in a random manner (O'Shaughnessy 1987, p. 65). This is not in fact contradictory to what was discussed in section 4.4.2 where online shopping was described as a mentally intense activity. Instead, it is precisely because online shopping is so mentally intense that at certain junctures, online shoppers choose to give their brains a reprieve from cognitive activity, and engage in "picking" which requires less mental processing and lower levels of attention by the actor.

"Picking", as discussed above, also occurs in response to the deluge of information which online shoppers are presented with. It is neither a non-conscious nor a sub-conscious activity. Instead, it *is* conscious but utilises fewer attention processes than others. Take the example of Kevin:

> *"I actually stopped looking at the names [of the shoes] because they mean nothing to me at this point. I was just interested in getting a glance at all the types of shoes and I noticed that they were moving down in price pretty much and they look very different from the ones near the beginning of the list, which I thought was interesting."*

"Picking" behaviour can also be attributed to the relative difficulty of reading text on the computer screen as mentioned in the last section. Research has shown that 79 per cent of Web users scan rather than read i.e. they skim through text and pick out sentences and keywords of interest while overlooking the rest (Nielsen 2000, p. 106). Another probable cause is that the World Wide Web is a collection of hundreds of millions of pages and users are not certain as to whether the webpage which they are on is indeed the one which meets their needs or whether they should improve their chances of success by quickly assessing one webpage before rapidly moving onto another. Hence Web users skim through pages to assess their relevance rather than reading them carefully. This could indeed apply to online shoppers as well as they scan each online store to see if it offers them the requisite products before rapidly moving on to another store as was seen in the case of Susan and her abandonment of CDNow.com for Amazon.com.

4.3.5 Automaticity in online shopping actions

At the same time, it appears that a small but significant proportion of actions in online shopping occur without the occurrence of action accompanying cognitions or the utilisation of attention processes. Automatic actions are often triggered by external stimuli:

> *"Any skill - perceptual, motor or cognitive – requires less and less conscious attention the more frequently and consistently it is engaged in and can eventually operate with no conscious attention at all...With experience, these processes come to operate autonomously; once started in motion, they interact with the complex environment as automated strategies"* (Bargh and Bardollar 1996).

This statement can be applied to online shopping actions as well. A large part of online shopping involves repetitive actions in predetermined sequences. This repetition tends to result in the development of automaticity in the actor such that in response to certain environmental stimuli, the actors perform certain actions. Automatic links then exist between a set of situational features and behavioural goals and this results in predictability of actions (Bargh and Chartrand 1999). It has in fact been argued that a recognition of situational variables can contribute to an enhanced understanding of consumer behaviour (Belk 1975).

Nonetheless, automatic actions which arise should be viewed not as static behavioural responses but as automated strategies which guide responses according to the information in the environment (Bargh and Bardollar 1996). Automatic actions can also be interpreted as "recurrent themes" where certain actions recur for the "solution of a common problem" (Cranach 1996, p. 155). In the case of regular online shoppers, shopping online had become a recurrent theme in their lives. Take the example of Nicole. She had become so accustomed to the Yahoo store interface that many of her actions were automatic. She clicked on the "sort by price" and "narrow range to" buttons without hesitation or deliberation. Similarly for Elaine who literally had her hand poised over a particular section of the computer screen, waiting to close a pop-window which she knew from experience would appear.

The nature of the online environment tends to condition automaticity in its users. Take the typical set-up of search engines as an example. They comprise a list of hyperlinks, usually highlighted in blue. The user is likely to click on a hyperlink, view the website which appears, click "Back" on his Internet browser to return to the search engine and select another hyperlink from a search engine page. This process can go on until the user has viewed all the relevant hyperlinks suggested by the search engine. The process therefore has a self-repeating sequence. The repetitive process of clicking "Back" and selecting a new hyperlink can become automatic. Similarly, the more frequently an online shopper visits a particular online store, the more confident he/she is of navigating the store and therefore the increased likelihood of automatic actions developing. Many online stores are designed and laid out in the same way, with the product categories listed on top, a search engine box to the left hand corner etc.

This has interesting implications for the maintenance of online stores. If the proportion of automatic actions in online shopping increases, the level of attention which the shopper devotes to his/her actions will dwindle and this may lead to cursory rather than thorough information processing. Online shoppers are likely to overlook special promotions or new product ranges in online stores which they frequent because they automatically click on the same sections. Online stores have to therefore update their store layout, the same way brick-and-mortar stores change their store windows. This of

course has to be balanced against the cost of inconveniencing regular customers who have to keep up with constant changes in the online store layout. Nonetheless, it is possible to update a store layout without a complete overhaul. At the same time, automaticity may also lead to a higher occurrence of impulse purchases. This will be discussed in greater detail in Chapter 5.

4.3.6 Emotions

A special type of action accompanying cognitions constantly occurred in online shopping actions – emotions. Emotions determine the goals and sub-goals of goal-directed action and influence subconscious self-regulation (Cranach, Kalbermatten et al. 1982). Emotions arise involuntarily and "may be represented cognitively" (Cranach, Kalbermatten et al. 1982, p. 80). Prior consumer research has shown that emotions cause a focusing of attention on the instigating stimulus and disrupt ongoing goal-directed activity (Cohen and Areni 1991). They also result in consumers being able to reach a purchase-related decision faster (Cohen and Areni 1991). Positive emotions can also result from flow experience when interacting with virtual reality environments (Hoffman and Novak 1996; Novak, Hoffman et al. 2000; Rettie 2001). This will be discussed in greater detail in section 4.5.6.2.

Emotions appeared to have considerable influence on the selection and enactment of goals and sub-goals. Holbrook and Hirschman (1982) argued that consumers sometimes enjoy shopping environments for their own sake and that the positive emotions experienced in such environments have a positive influence on their product evaluation and decision-making process. This was shown to be the case in Elaine's online shopping actions. She experienced positive emotions when she entered a particular online store. This positive emotion heightened her appreciation for and loyalty towards the online store:

> *"I loved the picture, it totally responded to me and, especially with wedding stuff, like a lot of wedding websites seem like extremely cheesy and so I always feel much more comfortable with a store like Crate and Barrel where it's like, I know its great stuff, I know what it is and I think that that was reiterated when I saw it. It's like, 'Yes, that's much more my style than the other website.' I mean just the*

look of it was much more appealing. So actually, when I came here I was thinking this is where I definitely need to register. It makes more sense for me."

Emotions also had an energising effect. In the case of Kevin for example, his feelings of frustration at not locating the videogame energised him into coming up with ways and means to achieve his goal as seen in Chapter 3.

At the same time, emotions appeared to have an enduring effect on actions as well - the formation or reinforcement of action-influencing dispositions. These emotions affected the actor's actions for the short term, but also impacted upon the long-term dispositions which the actors had towards online shopping. Gabrielle for example was already suspicious of online shopping. In her interview, she encountered difficulties in accessing a particular website. These difficulties aroused anxiety in her and this emotion served to reinforce her disposition of suspicion towards online shopping in general.

"And I said, 'Wait a minute. This is not an airline webpage,' and then I had the problems. Then I tried Jetblue and it wouldn't open up. And I thought, 'Oh, that's the risk of going with these dot coms. They might close on you. One day or the next.' I mean I don't know what they do when they're closed...Yeah, I was panicking about this Jetblue thing. I told you. Yeah I guess there was frustration and disillusionment." Gabrielle

4.4 INTERACTIVE ACTIONS

When social interaction takes place between different actors, there are connections between each actor's goal structures. Interaction involves different actors and reciprocal influence amongst the actors. However, interactive actions did not appear to be a significant feature of typical online shopping actions. A majority of the interviewees said that online shopping was an independent and private activity for them. As a result, they were unlikely to engage in interactive actions while they shopped online, either with friends or with online store assistants. Nonetheless, a few interviewees had engaged in interactive actions during their online shopping:

"...I had a question about one of their products and I said 'Does the colour fade easily when I wash it, how should I wash it?'...And somebody came on and it was pretty cool. I asked my question and they responded and I was like 'Oh that was helpful.'" Glen

Glen had interacted with an online sales assistant through a real-time online chat provided by the online store. This was the only example of synchronous interactive action mentioned by the interviewees. Most of them engaged instead in mediated, asynchronous interaction while shopping online.

4.4.1 Mediated, asynchronous interaction

While online shopping is mainly a independent activity, there is evidence that the Internet is facilitating and mediating interactive actions in a unique way. Some interviewees professed to requiring a second opinion on their purchases. In such cases, obtaining a second opinion was usually through emailing friends and family members the hyperlinks of online purchases the interviewees were contemplating. Such interaction may be unique to online shopping:

> *"Usually when I get to the end of the process, especially if it's a big buy, like I just spent $300 a couple of months ago on my speaker system and so I narrowed it down to three products and my best friend, he and I both are like really into computers and stuff and so I sent him the links to look at and I told him, 'I'm like really interested in this one and just make sure I'm not completely crazy.' So he looked through all of them and he wrote me back and he's like 'Yeah. Looks by far the best one' and he's like 'Go for it'."* Kevin

> *"I do email my best friend who lives in Chicago and so very often I'll email her a link and say, 'What do you think of this? Take a look at it and let me know what you think.' And she'll send me stuff all the time. And then also I'll email my mum who doesn't shop, never shops online but I'll send her pictures and say, 'Isn't that bench so cute, wouldn't it look great in the backyard?' so I end up doing a lot of online shopping for her like I'll look for her online and call her like, 'There's this great thing in the store, you need to go check it out' or I'll email her a picture or something."* Elaine

In a regular brick-and-mortar store, a consumer who is shopping independently but wants to consult his/her friend on a product would probably phone his/her friend and describe the product. (This is however likely to change with new generation mobile phones which can take digital photographs. Conventional shoppers will have the ability to take photographs of products and send them to their friends to obtain a second opinion.) Alternatively, he/she may simply decide not to purchase the product due to his/her inability to get a second opinion. In online shopping, the consumer's decision-making process can be extended indefinitely. Due to the accessibility of the Internet, both

the consumer and his/her friend can shop "together" at an online store and peruse the same products, even if the two of them are miles apart.

This is impossible even with other home shopping methods such as television and catalogue shopping. Internet technology can therefore transform a consumer's personal shopping trip into a shared experience which transcends geographical and temporal boundaries. In recognition of this form of interactive behaviour, some retail sites have "email this product to a friend" functions for consumers to consult their friends or to recommend products to their friends. Computer-mediated communication is expected to become increasingly complex with advancements in multi-media software and the Internet (Soukup 2000). Such technological developments could increase the potential for online interactive actions and introduce the possibility of people shopping together virtually, as in a brick-and-mortar store, so that online shopping could become a social activity.

Yet another form of mediated, asynchronous interaction takes place in the online shopping environment. Online shoppers read other consumers' reviews and product feedback to aid their decision-making:

> *"I sometimes go to like message boards or forms, that sort of thing. It's not like a real time sort of thing. It's just postings. People come and leave notes and stuff. And occasionally I'll do that and try and get a feel of what people think about a certain product. But never chat rooms that sort of stuff."* Tom

> *"Yeah I think it's a really good way to get feedback as opposed to just relying on the manufacturer so I do like that feature on the site. To get a regular person's opinion."* Jan

> *"And what I like about Amazon and some other ones is also that you can read about the CD. Sometimes I find even the customer reviews interesting."* Gabrielle

> *"I'll go to amazon.com and look something up and they have consumer reviews you know. And you compare those and you read the unfavourable as well as the favourable. Then I find that really helpful in my own decision for big products."* Kevin

Consumer psychology has researched the extent to which consumers' sense of self and sense of others influence their shopping behaviour. Social comparison theory

posits that people evaluate their own opinions and abilities and tend to do so by comparing themselves with others (Festinger 1954). In particular, consumers use the behaviour of others as key references about which goods and services to buy, use or avoid (Folkes and Kielser 1991). They are interested in knowing if their product choices are "correct" in terms of factors such as value, quality and status.

Consumers may also adopt the behaviour or beliefs of others because they see it as an efficient and effective way of obtaining reliable knowledge (Foxall and Goldsmith 1994). They consider other consumers who have had experience with a product as possessing "expert knowledge" about a product or a brand. If the consumer is shopping in a regular retail environment, he/she might observe what other consumers are purchasing and this could influence his/her consumption choices. However, such comparisons are not easily made if there are few other consumers in the store or if other consumers are not purchasing items of a similar genre.

Online shopping circumvents this "problem" and many online retail sites readily present other consumers' product opinions on their sites. Online booksellers such as amazon.com and barnesandnoble.com provide customer reviews of books. Amazon.com goes further to suggest that "customers who bought this book also bought..." with the expectation that consumers will be influenced by possibly likeminded people. At the same time, consumers are all invited to share their reviews with other consumers. An exchange of information can therefore take place, mediated by the Internet. If product reviews are not available on a retail site, online shoppers can easily seek product reviews in chat rooms, discussion groups or other information portal sites where information is again exchanged in this mediated, electronic forum. Indeed, "communication from many people to many people is close to the norm in cyberspace" (Jordan 1999, p. 79). The Internet thus vests the consumer with an enhanced ability to "interact" with other consumers, be it to seek affirmation or to offer disaffirmation. One pilot trial interviewee acknowledged that she had made an impulse purchase online because she was influenced by the favourable customer ratings and positive reviews of the book she was interested in. She added that the disadvantage of a brick-and-mortar bookstore was that she would have

no inkling as to whether other customers were buying a particular book nor what they thought of it.

Therefore, online shoppers engage in interactive actions of a unique kind. Since online shoppers tend to shop independently, they do not usually engage in typical interactive actions such as speaking to someone else in real-time. They do however engage in mediated interactive actions where they "share" their virtual shopping experience over the Internet. Online shoppers also engage in a form of asynchronous interactive action where they "communicate" with other consumers through the Internet. With the growing ubiquity of mediated, asynchronous communication, the theory of activity and goal-directed action will have to be modified to take into account these mediated forms of interaction.

4.5 DISPOSITIONS

Dispositions such as mental representations and value structures play a significant role in guiding actions. Mental representations include memory and knowledge processes while value structures include personal attitudes and social conventions.

4.5.1 Intermigration of mental representations

Schank (1982) discovered that when encountering day-to-day situations, the memory of a person organised in one memory structure reminds them of something that would normally be classed in a different structure. This was noted in many of the interviewees. Shoppers who were more accustomed to shopping online were reminded of their online shopping when they were in brick-and-mortar stores. On the other hand, shoppers who preferred shopping in brick-and-mortar stores made use of their knowledge of conventional shopping to guide their online shopping. There was thus an "intermigration" or transference of knowledge and memory structures from one shopping environment to another.

In the case of Kevin and Nick, there was a transference of their online shopping representations to their conventional shopping:

"...like I went into Century 21 in New York City couple of weekends ago. I was completely overwhelmed. Completely overwhelmed. I felt like I needed somebody to take my hand and show me what to do. And this store, because it was such a hodge podge...in a situation where there are just so many options and they're all not at my fingertips, like I had to dig and things like that...that gets me very frustrated and I don't want to deal with it. Whereas online, like if Century 21 were online and all their clothes were online, I probably would have bought 10 things. Their prices were so good and everything but I just, I couldn't handle digging through clothes after clothes after clothes." Kevin

"For example, I go to a clothing store, they might have advertised a sale. But they don't have the type in stock that's the proper size for me. And it's very frustrating because when you go and there's racks of shirts or pants or whatever...and they aren't necessarily in the right places because...someone's taken them out and then put them back in the wrong spot. So you say, 'I wanna get pants that has this size waist and this length,' I spend maybe half an hour or an hour looking for one and then leave in frustration because I can't find one. If I could go online and say, 'I want a pair of Dockers pants, this is the size, and can you tell me either to go to a store locally or to... ship it to me'." Nick

Both Kevin and Nick were disoriented and frustrated when they were in the brick-and-mortar store because they had become so accustomed to clicking on a particular product category within a website and specifying the size and price range of the products which they were interested in. But the brick-and-mortar stores had no such facilities.

In addition, due to the fact that most consumers are more accustomed to conventional shopping given its longer period of existence, there has understandably been a migration of conventional shopping habits into online shopping. For example, online shoppers make use of visual indicators which they are accustomed to seeing in department stores to guide their shopping. This was Kevin's thought when he was shopping for a videogame online: *"I was looking for a box cover and I didn't even see that so I got frustrated"* . More examples of this form of migration will be mentioned in the next section.

Hence, online shoppers can be broadly divided into two groups – those who are more accustomed to online shopping as opposed to those who are more accustomed to conventional shopping. Almost all consumers in the developed world are exposed to bricks-and-mortar stores. Increasingly, many consumers are also exposed to online stores. This hybrid shopper is set to be the shopper of the future, where his/her mental

representations of shopping will be an uneven combination of experiences of both conventional and online shopping.

4.5.2 Script conflict

The inter-migration of mental representations from one shopping environment to another tends to result in script conflict. As human beings, we process the world around us, discern recognisable trends and use this knowledge to make assumptions about what will happen next. Given an action, it is reasonable and logical to expect that a particular action will follow – this the essence of a script (Schank 1982). Scripts enable actors to interpret actions according to pre-determined, stereotyped sequences of actions which characterise familiar situations (Schank and Abelson 1977). Various types of scripts exist – personal, situational and instrumental (Schank and Abelson 1977, pp. 61-65). Scripts can often prepare the individual anticipating a particular result from a particular action, but can also lead to the development of wrong assumptions which lead to false expectations. It has been recognised that when using software, people become frustrated and confused if they are unable to execute their actions in the order or sequence which they expect (Ravden and Johnson 1989). They may lose track of what they are doing and be uncertain about what to do next.

Consumers of today now have two sets of scripts to deal with – scripts for online shopping and scripts for conventional shopping. Given the inter-migration of mental representations, it is inevitable that these online and conventional shopping scripts will come into conflict with each other. Online shoppers are starting to develop an idea of how the majority of conventional websites work, how the tabs at the top or the side of the screen provide the user with a "map" of the site and what it offers. This knowledge seems to have achieved the status of a "script" within the web medium. Let us consider some examples of online shopping scripts which have emerged:

> *"Actually the site is kind of confusing. When you clicked on digital cameras on the left side, it brought you up to that window that again had a list of products so I thought that would give you more of a selection of what type of digital cameras but it didn't. It just gave the product list again."* Joe

"...I wasn't sure if the computer was responding. It didn't give me that little timer thing, that timer that appears when you press. That's why I kept on pressing." Gabrielle

"...I was trying to click to see cos on some sites you can click on the big image and it will let you rotate the image but they didn't have that." Kevin

"I chose to look a little bit closer [Clicks on image]... I found out sometimes if you click on the picture, it will get larger." Pam

In Joe's case, he had obviously become accustomed to the linear progression of online shopping scripts where clicking on one link expands on the information in the previous link and so on. On her part, Gabrielle knew that if the hour glass symbol did not appear, the interface was probably not responding to her input command. In the case of Kevin and Pam, they had become used to the fact that clicking on website graphics either enlarges or rotates them. These are scripts which are unique to the online shopping environment.

The complication arises in situations where online shopping scripts resemble but are not identical to conventional shopping scripts. It is with such scripts that conflict arises. Take the example of Gabrielle. She commenced her search for plane tickets by logging on to an online ticket agent to obtain prices. Gabrielle had to input her search criteria according to the interface design and she felt that she would have been far more efficient if she had called a travel agent on the phone:

"...they [the interface] always ask you to write 'morning, evening, afternoon' and their results never have anything to do with whether you write 'evening, morning' as I can tell. They just give you results according to the cheapest price but for me I always wonder if it's worthwhile filling in those spaces...I was also thinking actually that's one of the things about online shopping that sometimes, you often have to go down these paths just to see where it's gonna end up whereas when you're speaking with the operator, you can say, 'Look it's in the same area. Could you tell me whether it'll cost completely more or not?'...So I had a feeling this wasn't going to work but I tried it anyway."

In Gabrielle's case, there was a clear tension between what the interface required her to do and what she had become accustomed to from her conversations with travel agents. With the latter, she merely has to state the different destinations she requires and to ask the travel agent to find her the best possible combination of price and convenience. With

the former, the rigidity of the online shopping script frustrated her. She had to input information which she found irrelevant and even having done so, she was not confident that she would get the information she required. The limited affordances of the online shopping interface cannot compare to the flexibility of conventional shopping.

Script conflict was also seen in the case of Pam:

> *"Then I looked at this rather closely cos my daughter wants an oversized chair and this is considered a chair and a half so I looked at that and I wanted to see how much it was. So I think I went a little deeper...And I looked. I finally got there. Yes. I think it's beautiful. So here I was looking for...now I'm looking for the price. You don't see the price. So I'm looking, thinking where, then I finally figured I need to go here so I think you'll see me jump over here. But I like the brightness, the colour, the pictures. I think their pictures are generally beautiful and sharp and bright. Then I scanned down to see what the cost was."*

In a brick-and-mortar store, the script involves the shopper viewing the range of available goods, before focusing closely on a particular item which he likes. The next thing he does is to locate the price tag to check the price of that particular item. The website which Pam was surfing only adhered to the conventional shopping script halfway. It had an attractive photograph of a roomful of furniture which enabled the shopper to take a broad sweep of the available merchandise. Each piece of furniture could also be clicked on a for a closer look. But once you had that closer look, it was difficult to locate the price of specific items. What would have been more effective would have been a virtual price tag on each item. But the website expected the shopper to click on a different section to find out the product prices.

In the experiences of both Gabrielle and Pam, there was no correspondence between the conventional shopping and online shopping scripts. As a result, they came into conflict. Clearly, the weakness of online shopping scripts lies in their rigidity and unpredictability - every step in the script must be performed and there is uncertainty as to which step comes next. As Schank and Abelson noted, "(m)echanistic approaches based on tight logical systems are inadequate when extended to real-world tasks" (1977). The phenomenon of script conflict has important repercussions for the design of online interfaces. When using any computer software or interface, the user has in mind a model

of how the computer will perform the task (Clarke 1986). When a disparity exists between the user's conception of actions required to fulfil a goal and the actions which the system interface actually allows, a gulf of execution results (Norman 1988). Script conflict is roughly analogous to the gulf of execution. It is however a unique manifestation of the gulf of execution because it pertains to activities which transcend two different environments – the physical offline environment and the virtual online environment. Reeves and Nass (1996) also assert that when media conform to real life and its social rules, people will be able to use such media with minimal instruction.

Other activities which similarly transcend the online and offline environments, such as Internet banking and online medical consultations, will also encounter the situation of script conflict. Consumers will use their scripts for these activities in the physical environment to guide their actions in the virtual environment. Systems and interface designers should strive to ensure that the online script does not detract too much from the conventional script as the user will be confused and feel insecure about whether his/her online actions will achieve the desired results. Insecurity on the part of the user will impact negatively on the level of trust he has in the interface. It is important for designers to remember that people who use online interfaces do not merely live online but bring their experiences from the physical offline world into their online actions. It is only with this awareness that interface usability and consumer satisfaction can be enhanced.

4.5.3 Relevant knowledge

Cranach divided action-related knowledge into eight classes (Cranach, Machler et al. 1985). From the experience of the subjects studied, online shopping utilises all classes of action-related knowledge except personality knowledge and person-specific knowledge. As for consumer expertise *per se*, Selnes and Troye (1989) identified four dimensions: (i) specific knowledge about brands, (ii) specific knowledge about product categories, (iii) general purchasing expertise and (iv) general problem-solving skills and intelligence.

The interview findings revealed that the consumer expertise demanded of online shoppers extends beyond these four dimensions to include general knowledge about e-commerce and alternative shopping options, specific knowledge about the Internet and online shopping technologies such as search engines, comparison shoppers, chat rooms and website design. Differing knowledge levels influence the course of online shopping actions. The interview findings showed that the more knowledge the online shopper has about different technologies and technical features of the Internet, the more complex his route network will be.

4.5.3.1 General knowledge

E-commerce has introduced new shopping options to consumers. However, along with this increased choice has come a growing need to understand what online shopping actually entails. Many aspects of online shopping are intuitive, such as surfing different online stores and examining products virtually. Other aspects of e-commerce such as making a secure transaction and safeguarding your privacy are still a source of confusion for many consumers.

Given this atmosphere of uncertainty, general knowledge of e-commerce would greatly aid the consumer in guiding his online shopping actions. An online shopper who is aware of the security risks of e-commerce can opt to pay by credit cards which insure against unauthorised online purchases. A consumer who understands how online stores collate personal information about its customers can opt to decline any "cookies" which sites embed in consumers' personal computers. Therefore, general knowledge about the risks and benefits of e-commerce as a whole and of consumer protection mechanisms will greatly aid the consumer in planning his online shopping actions. Indeed, the more knowledgeable consumers are, the less risk-averse they become (Bhatnagar, Misra et al. 2000).

The online shopper also needs to possess knowledge of the advantages and limitations of alternative shopping options so that he/she can select one which he/she is comfortable with. For example, when considering online shopping, he/she needs to weigh the wide product range available against the inability to examine the product in advance.

When considering conventional shopping, he/she has to take into account the inability to comparison-shop efficiently, as well as the financial and time costs of commuting to the brick-and-mortar store. As a result, consumers of today need to have some general context knowledge of the shopping options available to them to meet their shopping needs effectively.

4.5.3.2 Specific knowledge

In a regular store, a shopper can easily look through the aisles to acquaint him/herself with how the store organises and classifies its merchandise. This is not the case in an online store. Often, product categories are listed but the online shopper cannot know in advance which products come under these categories without first clicking on them. An online shopper either has to be very experienced or to go through a tedious process of trial and error before he/she can begin to understand the online store's product classification system. Online shopping can therefore be a difficult process where the shopper has to harness diverse bodies of specific knowledge before he/she can successfully obtain information and locate the products which he/she needs. Effective action entails general knowledge but also specific knowledge in particular.

Specific knowledge of how search engines work is especially useful in online shopping. For many of the subjects interviewed, the search engine was the first step in their product search. However, search engines use different methods to rank search results. Some rank their results by the costs which the search engine charges the advertiser. These search engines will therefore list the higher-paying advertisers first, regardless of how relevant they are to the search string, e.g. Dogpile.com. Other search engines like Google.com use a more humanistic method, ranking its search results by the frequency with which websites are visited by other users with similar search strings. This sorting system tends to result in more relevant search results. Consumers who do not realise how search engines work are liable to click on the highest ranked hyperlinks, without understanding how the ranking system works. The unknowing consumer will pay more attention to the first few search engine listings while the knowledgeable consumer will be more discriminating in his choice. Tom for example understood how some search

engines listed their search results according to the advertising costs paid by the retail sites and this is likely to make him more discerning:

> *"And also the search engine determines also what sites you shop and that's why they charge money for these things to get at the top of the search...But the best guy might be down at number 92."*

Specific knowledge of website design also plays a key role in influencing the course of online shopping actions. Glen and Kevin were both aware of the finer points of website design and this aided them greatly. As seen in Chapter 3, Glen knew how to read the Java script of each hyperlink and this helped him to understand the relevance of the hyperlinks he was clicking on. Kevin knew that links are sometimes hidden under graphical elements and this enabled him to locate his videogame.

Specific knowledge of the appropriate terminology for describing merchandise is also very useful for online shopping. In brick-and-mortar stores, consumers rely on visual indicators to aid their shopping (Alba, Hutchinson et al. 1991). They observe the layout of the store to identify the likeliest location for the product which they require. In addition, while consumers may be unable to recall the names of products, they can often recognise them by their packaging, shape and size, e.g. the familiar green and black design of a can of Heinz baked beans. In online shopping, consumers do not have the aid of such visual indicators. Instead, the online store is a collection of hyperlinks which the consumer has to "leaf through" to locate a product. This is of course unnecessary since many retail sites offer search engines for locating products, or offer product category listings under which consumers can make a more direct search.

Nonetheless, the World Wide Web is fundamentally a text-driven medium as Internet users navigate their way within websites through the use of text-based search engines. To successfully search for a product using a search engine, online shoppers need to know the exact terms for describing the products which they want and the nomenclature which stores adopt before they can locate the desired products. This was demonstrated in the case of Pam who could not decide whether to look for a mirror under the categories "Mirrors with hooks and shelves", "Wall Décor" or "Frames".

Norman argues that "[p]eople do best with signals and information that fit the way they perceive and think, which means analogous to the real world" (Norman 1998, p. 140). He adds that "[n]atural mapping...taking advantage of physical analogies and cultural standards leads to immediate understanding" (Norman 1988, p. 23). In this regard, the text-based representation of merchandise in online stores is incongruent with how consumers shop given that in a brick-and-mortar store, they scan through the aisles to locate what they want rather than look for a list indicating where items are located. A graphical representation of product categories would inherently be more useful for online shoppers. This is however currently compromised by the long download times for graphics and the relatively poor penetration of broadband Internet access throughout much of the world.

4.5.4 Attitudes

According to the theory of concrete actions, outwardly directed action results from attitude processes which relate the actor's values to his actions. Actors strive to realise positive values and to avoid negative ones. They use this value system to evaluate goals and goal-directed actions, resulting in a "preference hierarchy" of actions (Cranach *et al*, 1982, p. 93). From the qualitative study of online shopping actions, it was evident that attitude processes influence online shopping actions.

The two attitudes which were found to have the greatest bearing on online shopping actions were store-consciousness and price-consciousness. In online shopping, the reliability of the store is a prime consideration for many consumers. Their inability to physically see the store and its products prevents them from making purchases for fear that the products or the store do not meet their expectations. This leads some online shoppers to take safeguards such as shopping only with reputable websites or websites of established brick-and-mortar stores. However, other online shoppers are prepared to risk patronising obscure online stores as long as they offer attractive prices. Online shoppers tend therefore to be more store-conscious or more price-conscious. Price-consciousness and store-consciousness seem to lie on a continuum where the more price-conscious an online shopper is, the less store-conscious he/she is and vice versa. Kevin and Glen for

example were more price conscious compared to Mike and Nick who were more store-conscious.

4.5.5 Social control

Actions are subjected to social control in the form of conventions, rules and norms that influence cognitions and self-regulated behaviour. However, due to the private and independent nature of online shopping, online shoppers' actions do not appear to be affected by any forms of social control unlike in conventional shopping. For example, in a brick-and-mortar store, a consumer may be guided by conventions that he/she should not leave the store without making a purchase, especially if he/she has consulted the sales assistant at length. Also, he/she may try to conceal his/her enthusiasm for bargain items so as to appear wealthy and sophisticated.

However, online shopping does not carry the baggage of such social conventions as the Web interface is inanimate, devoid of feelings and non-judgemental. On the Internet, the online shopper can view bargain items at leisure, without the glare of the societal eye. He/She may even decide, after having shopped online for hours, that he/she does not wish to buy anything and not feel that he/she has failed to meet his/her "obligations". Indeed, none of the online shopping actions studied appeared to be subjected to any form of social control whatsoever. Nicole compared the social pressures of conventional shopping to the freedom of online shopping:

> *"...when you're in a store and you're there forever and you try a lot of things and you feel bad because the sales people talk to you. Like I feel like this [online] store, they don't even know I'm there. They probably knew I was there but I just don't feel any obligation to buy."*

This situation demonstrates the effects of technological mediation on an everyday activity like shopping. When actors interact with other individuals, both parties' actions are guided by social conventions. Each party responds to the opposite party according to their manifest behaviour, e.g. a store assistant presents a shopper with the most expensive products because the shopper had lingered over them. Both parties are unable to perceive the true intentions and goals underlying the opposite party's behaviour. The shopper may have been unable to afford those expensive products but was interested in gawking at

them or in keeping up appearances of being able to afford them. On his part, the store assistant may have been promoting the expensive products because they would earn him a good commission.

Human-computer interaction is stripped of such social dimensions. The online shopper has no need to present a "front" to an online store and is free to reveal his true intentions. He/She has no shame in stating that he/she has a low budget as the interface will not judge him. The actor therefore reveals to the interface his truest intentions and goals. However, it should also be noted that some human-computer interaction interfaces are also designed to mimic human behaviour by following customary social norms or social practices in so far as the affordances of the medium allow, e.g. addressing the user in a personal and customised rather than a mechanistic and generic manner. These quasi-social interfaces may yet be able to elicit different responses from users than asocial interfaces.

4.5.6 Motivation states

The enactment of online shopping actions is also influenced by the motivation state of the actor. In this regard, emotions can play a role of motivating and energising the actor, as discussed in section 4.4.6. However, short-term self-regulatory processes also affect the motivation states of actors – state- and action-orientation and flow. While these are short-term processes which occur only during the execution of an action, they are actually dispositions which have developed in the actor over time.

4.5.6.1 State and action-orientation

State-orientation and action-orientation are concepts which are as relevant to the online shopping environment as they are to the conventional shopping environment. The temptations and diversions which come into play in conventional shopping are also present in online shopping. For example, Elaine knew that she had a weakness for scarves. As a result, when she chanced on some scarves in an online store, she thought to herself: *"Let me quickly get past the scarves or I'll want to buy them."* This built-in safeguard or self-regulatory process helped her to guard against her state-orientation which makes her susceptible to environmental influences.

Therefore, the strength of an online shopper's self-regulatory processes impinges on his/her online shopping actions, e.g. his/her susceptibility to interactive website interfaces, his/her tendency to utilise search engines to locate products rather than to surf websites indiscriminately etc. The action-oriented interviewees were mostly motivated to shop online because of time constraints and did not appear to be easily distracted within the online environment. Instead, their actions were mainly purposeful and goal-directed and they adhered to fixed goals. The state-oriented interviewees were also goal-directed but were more likely to have varying goals. Some action oriented interviewees also had varying goals but in the form of multiple goals which were generated and fulfilled in quick succession as discussed in chapter 3. As seen in Chapter 3, Kevin's state-orientation and Mike's action-orientation resulted in their online shopping actions being very different.

4.5.6.2 Flow

The unnatural setting of the interview situation would undoubtedly have affected the interviewees' ability to experience flow during the interview. Hence, their experience of flow in their typical online shopping activities was probed during the semi-structured interview. The findings showed that the propensity to experience flow is related to but is not caused by state- and action-orientation. While almost all of the state-oriented interviewees had experienced flow, some of the action-oriented interviewees had also experienced flow.

Hoffman and Novak (1996) postulated that consumers who experience flow while surfing online stores have more positive subjective experiences, pay frequent, repeat visits to online stores and spend a longer time at the stores. Indeed interviewees who had experienced flow mentioned losing track of time and daydreaming about the products and services which they saw online. Flow thus affects the motivation state of the online shopper by making him/her more likely to surf online stores for prolonged periods rather than to simply fulfil his/her goals and stop surfing. Online shoppers who experience flow are also more likely to make purchases rather than to just surf. Consider the following responses to the statement, "I get so involved when I shop online that I forget everything else.":

"That's true, especially if there's something good, if there's a bargain. If it's a true bargain and not a false sense of enjoyment. Yeah, I'm very distracted, I forget everything else, especially my homework, especially my thesis, and if it's so important that it becomes a priority, it'll become a priority for me to put an end to the matter and that becomes buying it or not buying it...some sort of resolution...so yeah, I do tend to get very much wrapped up in that." Glen

"Sometimes I do, yeah, occasionally when I stay up kind of late just looking around and usually the things I forget are sleeping and studying." Ian

It is interesting to note that the most commonly cited reason for experiencing flow in online shopping was not the vividness of the media but the thrill of finding good bargains.

4.6 Inter-Relations Amongst Different Actions Dimensions

In conclusion, online shopping actions are affected by a host of inter-related structural, cognitive and dispositional dimensions as shown in Figure 4.1. The execution of an action is motivated by goals which can be either fixed or varying depending on the state- or action-orientation of the actor. **Goal enactment and attention processes** including action steering, action monitoring and action accompanying cognitions occur to fulfil these goals. Action steering cognitions direct actions whereas action monitoring cognitions assess the efficacy of actions through a feedback process of "checking". Emotions, a key subset of action accompanying cognitions, influence actions in the long-term through a process of attitude formation or reinforcement. Automatic actions may arise in goal enactment, guided by memory and performed in response to situational variables. Interactive actions may also be performed to aid the enactment of a goal. Long-term **dispositions** such as attitudes, knowledge and memory processes guide actions as well. Short-term self-regulatory processes such as flow and state- and action-orientation affect the motivation state of an actor to enact a goal. Emotions also affect the motivation state of an actor because they energise the actor's action-orientation and goal protection processes, resulting in a greater drive towards goal fulfilment. State-orientation makes actors more susceptible to goal divergence and varying goals. Structurally, multi-tasking by the actor affects goal enactment and attention processes as it involves the management of parallel actions which require a high level of action steering and attention processes.

These different dispositional and cognitive goal enactment processes tend to result in a hierarchical-sequential online shopping action **structure**.

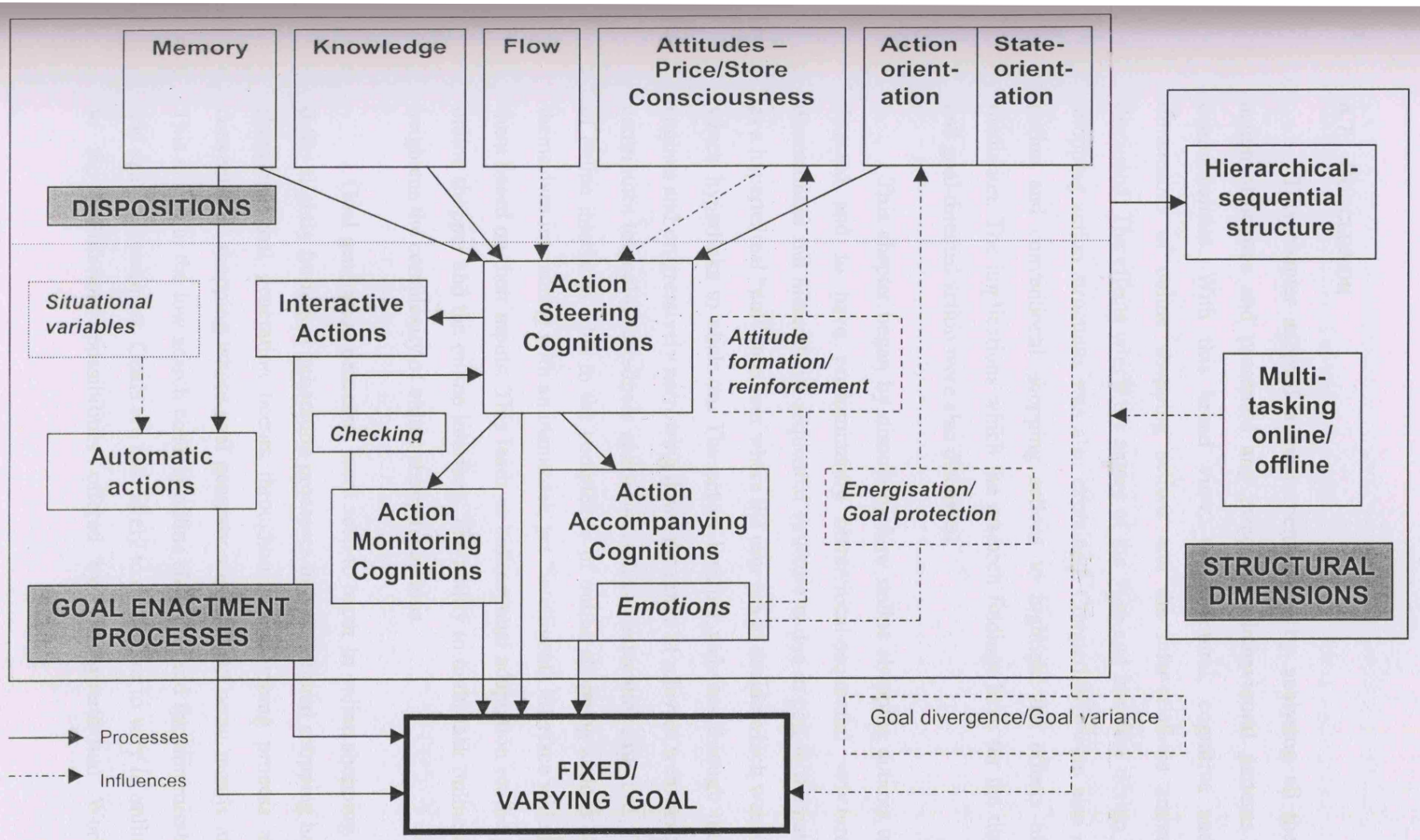


Figure 4.1 Inter-relations amongst the structural, cognitive and dispositional dimensions of online shopping actions

4.7 CONCLUSION

This chapter adopted a macro-perspective by analysing all the interviewees' action structures and presented any discernable behavioural patterns and structural commonalities. With this broad view, the structural, cognitive and dispositional dimensions of online shopping actions and the inter-relations amongst them was discussed. The effects which the nature of the Web and interface design have on online shopping action structures was also explained. Comparisons were also drawn between online and conventional shopping actions to highlight the effects of technological mediation. The implications which the research findings have for the theory of activity and goal-directed action were also discussed.

This chapter began by discussing how online shopping actions tend to be goal-directed and to have predominantly hierarchical-sequential structures. This goal-directedness and hierarchical-sequential structure is due in part to the nature of the Web as a hypertextual "pull" medium where the user has to decide which websites to go to and which hyperlinks to click on. The act of locating websites through the use of search engines and progressively narrowing down the range of relevant websites to consider also contributes to goal-directedness and a hierarchical-sequential structure. The interactivity of online interfaces adds to the complexity of online shopping actions as shoppers find themselves interacting with an inanimate, yet "intelligent" interface which can respond to them based on their inputs. This leads to bidirectional adaptation on the part of both the online shopper and the online interface. The ability to multi-task online and offline also heightens the complexity of online shopping actions.

Goal generation processes were seen to occur in online shopping. However, they differ slightly from goal generation processes in conventional shopping because in online shopping, goal generation occurs throughout the shopping process as compared to conventional shopping where goal generation is likely to occur mostly at the beginning. This is due to the low search costs in online shopping and the minimisation of temporal and spatial constraints. Goals are also likely to diverge or to vary in online shopping due to the multifarious possibilities offered by the hypertextual World Wide Web

environment. Online shopping also offers the unique possibility of goal deferment and of "rehearsing" purchases because the costs of visiting and revisiting a store are negligible. As a result, the online shopper can choose to defer the fulfilment of his/her goal at a later time, or to rehearse his/her purchase until he/she feels mentally prepared to make it.

To effect goal enactment in online shopping, action steering cognitions occur at a high frequency, due also to the nature of the Web as a hypertextual "pull" medium. Therefore, the online shopper has to constantly plan and decide on his/her next course of action. Action monitoring actions then perform the role of "checking" to assess the efficacy of each action in achieving the desired result. The phenomenon of information overload and its impact on goal enactment and attention processes in online shopping was also discussed. Due to information overload, online shopping can be a mentally intense activity as the shopper has to process copious amounts of information and to constantly decide which course of action to take next. Information overload contributes to the development of picking behaviour where the shopper makes his/her selections and decides on his/her actions in a random manner as that requires lower attention processes and gives his/her brain a reprieve from an otherwise mentally intense activity.

At the same time, automatic actions which require no action steering cognitions but which occur in reaction to environmental stimuli are also present in online shopping. It was also established that emotions have a role to play in goal enactment in that they serve to energise and motivate the actor to enact his/her goal. At the same time, emotions also influence the formation or reinforcement of long-term dispositions towards an activity or object. With regard to interactive actions, online shoppers appear to engage in mediated asynchronous interactions rather than synchronous interactions when they shop online. They email family and friends with product queries or recommendations and they also consult consumer reviews posted by other consumers in online stores or product review websites.

Dispositions influencing online shopping actions were also discussed. Due to the concurrent availability of online shopping and conventional shopping, many consumers take advantage of both shopping options and this results in an intermigration of mental

representations from one shopping environment to another. This intermigration then results in script conflict where the online shopper uses his/her conventional shopping script in an online store and when the two scripts do not correspond but come into conflict, the shopper is uncertain of what to do next. This heightens the shopper's insecurity about the efficacy of his/her actions and the reliability of the interface.

The relevant knowledge which online shoppers utilise to guide their actions was also touched upon. Online shoppers need to have general knowledge about the workings of e-commerce and consumer protection mechanisms. At the same time, they need to have specific knowledge about how search engines function, the product classification schemes of stores and even the nomenclature used by stores to describe products. Online shoppers needs to utilise these diverse bodies of relevant knowledge to efficiently locate the products and services which they need.

The attitudes of price-consciousness and store-consciousness were found to have the greatest bearing on online shopping actions. Price-consciousness relates to a desire to seek value for money while store-consciousness relates to a concern for the reliability of an online store. Price-consciousness and store-consciousness seem to lie on a continuum where the more price-conscious an online shopper is, the less store-conscious he is and vice versa. It was also established that online shopping actions are not subjected to any form of social control whatsoever due to the interaction with an inanimate and non-judgemental interface. Conventional shopping in contrast has the baggage of a host of social norms.

Factors influencing the motivation states of online shoppers were also analysed, namely state- and action-orientation and flow. State-orientation and action-orientation are concepts which are as relevant to the online shopping environment as they are to the conventional shopping environment. State-oriented online shoppers are more susceptible to environmental influences and to have varying goals. Action- oriented shoppers on the other hand are more likely to adhere to their pre-planned actions and to have fixed goals. Flow affects the motivation state of online shoppers by making them more likely to surf online stores for prolonged periods rather than to simply fulfil their goals. Online

shoppers who experience flow are also more likely to make purchases rather than to just surf. Finally, the inter-relations amongst the different structural, cognitive and dispositional dimensions of online shopping actions were proposed.

The next chapter takes a broad social psychological perspective of online shopping as a whole, rather than focusing specifically on online shopping action structures. It will undertake an analysis of several qualitative dimensions of online shopping, including issues such as online shopping as a leisure activity, social gains from online shopping, trust, mental account and the diffusion of online shopping in general. It will also expand on the theme of how technological mediation affects people's actions.

5 THE TECHNOLOGICAL MEDIATION OF SHOPPING

In the last chapter, the salient dimensions of online shopping actions were discussed, with particular attention paid to the action structures, the tensions between online and offline actions, and the influence which the computer interface and the nature of the Web have on online shopping actions. This chapter continues with an in-depth discussion on the technological mediation of shopping by the Internet. It studies the motivations for shopping online, the reasons for consumer ambivalence towards online shopping and the effects of technological mediation on certain dimensions of shopping behaviour including mental accounting, social gains, the possibility of conditioned impulse purchases and gender differences.

5.1 MOTIVATIONS FOR SHOPPING ONLINE

Many motivations for shopping online were detected from the interviews. Apart from the many practical advantages of online shopping established by existing literature, i.e. convenience, customised service and increased product range, see for example Elliot and Fowell (2000), the interviews revealed many intangible motivations for shopping online.

5.1.1 Recreation

Recreational shopping affords shoppers sensory, experiential pleasures (Holbrook and Hirschman 1982; Bloch and Bruce 1984; Hirschman 1984; Sherry 1990). Falk (1997) argues that the act of browsing and its component activities of looking at merchandise as well as touching them and trying them on also gives pleasure to shoppers. While shopping and the unbridled acquisition of material goods have been criticised for accelerating the pace of people's lives and depriving them of the time to engage in leisure activities (Scraton 1998), the dominant view is that shopping is *itself* a leisure activity (Ritchie 1975; Hawes 1987; Jansen-Verbeke 1987; Hawes 1988).

Online shopping can also be considered a leisure activity and indeed evidence has emerged of recreational online shopping (Li and Russell 2000). When an everyday activity like shopping is technologically mediated, it enables shopping to be conducted in

a relaxed and stress-free environment, to the extent that online shopping can become a form of leisure. Indeed, one of the strongest threads running through all of the interviews is how relaxed their typical online shopping environments are:

> *"I really like online shopping because it's almost always happening from midnight to 2 am and...[a]lways, on my futon, my laptop in my lap. It's usually the night time, it's like I'm in my pyjamas and I usually put a pillow on my lap because my laptop gets hot. And it's very comfortable, very relaxed."* Elaine

> *"I might be eating. I mean usually I listen to music or talk radio or something and then when I'm online, that's pretty much all that I'm doing."* Ian

> *"It's in an outside room, I mean in the sense that I has lots of windows that look out on the water... and I have a TV on, things around, telephone and telephone answering machine. It's real near the kitchen and I can get food."* Nick

> *"I'm sitting in a desk chair like this with a pillow. My cat will often be on my lap. He's realised that when I sit down at a computer, that I'll be sitting for a while. And so he always comes so he can sit on my lap...[and] I'll have a CD playing in the computer itself."* Susan

> *"I'm in my night clothes. I'm sitting in my chair. My computer's at the end of my bed. The TV's on. The cat's laying at the bottom of my feet...I smoke a cigarette."* Jocelyn

> *"[M]aybe while making dinner or something like that...And probably working on something, whatever I'm making on the computer. But it's usually I always end up thinking, 'God I wonder if I had that' and I would probably go online and check it out and find out how much it is. So like probably instead of watching TV, I'm spending an hour a day looking around at stuff. But normally we would just have the stereo on, some jazz or some classical music or things like that."* Tom

For most of the interviewees, online shopping seems to take place most often at night when the rest of the day's chores and duties had been dealt with. They would be in relaxed moods because they would have just had dinner and would be dressed in comfortable clothing such as pyjamas. Music would also be playing in the background and they would be doing pleasurable things such as eating, smoking or watching television. Their surroundings would generally be free from annoyances and disturbances. Indeed, two interviewees even had their cats on their laps when they shopped online – another sign of the laid-back mood of online shopping. This relaxed atmosphere, coupled with the fact that online shopping is an independent activity makes

it a kind of private time for the interviewees. It becomes a form of personal indulgence, a quiet time when the individual is free from the pressures of his daily grind. Indeed, for some interviewees, online shopping has even displaced other leisure activities such as television viewing:

> *"And for me it's [online shopping's] much more entertaining than television because I control it and I can go where I want to go when I need to go. So what it does is kind of like fills that void of like TV, 'I'm just gonna prop down on the couch and watch TV so that my mind can just take a break'... Almost always if they're both on, the Internet wins."* Elaine

> *"...I do find myself doing it as a distraction and I would even go online and look around as if I'm shopping with no intention of buying anything and I guess in that sense that would be enjoyable because I'm doing it because I'm bored or something."* Ian

5.1.2 Autonomy and anonymity

Campbell, cited in Falk (1997), asserts that shoppers derive pleasure from the autonomy and independence of shopping wherein they can determine where and how they shop. As seen in the previous section, online shopping is almost always conducted independently and as a consequence, online shoppers enjoy considerable autonomy. In contrast, conventional shopping often involves other interacting parties and this introduces social pressures that impinge on shoppers' autonomy:

> *"Like when I'm shopping with my mum, if she's gonna buy me something, it's usually kind of stressful just because...she always wears out much sooner. And there's more like, this is an event, this is a big deal. So sometimes when I'm with her, shopping has a negative connotation..."* Elaine

> *"If it is something that requires a store assistant...I would definitely opt for the online version because, for example...if I was buying...cologne or cosmetics where...they don't go on sale, the price is usually fixed, so it's just a matter of actually getting it, I would look around online. Maybe because if I were to go to the store it's very much an aggressive environment. You cannot browse. They will come up to you and in social situations like that, I'm not very comfortable with saying 'bug off and leave me alone' but I will if I have to...they simply will not let you browse. You must look, you must answer to whether 'well are you going to buy it or not?'. And online you do not have that at all. You can look for hours, go to sleep and you wake up the next morning and you look some more without having to be forced and that is something I enjoy a lot from being online."* Glen

> *"...when you're in a store and you're there forever and you try a lot of things and you feel bad because the sales people talk to you. Like I feel like this [online] store, they don't even know I'm there. They probably knew I was there but I just don't feel any obligation to buy."* Nicole

> *"I just feel freer online sometimes than when I'm in a store."* Ian

It can be seen from the quotations above that online shoppers feel liberated by the autonomy which they experience in online shopping as they are spared the social pressures of conventional shopping.

Online shoppers also enjoy considerable autonomy in that they have greater control over their own time. In conventional shopping, there is a sense of immediacy and time pressure which is less palpable in online shopping. This is due principally to the higher energy and time costs involved in conventional shopping. Having taken the trouble to go to a brick-and-mortar store, shoppers feel the need to make their time and effort worthwhile by buying something:

> *"I feel like in a store, it's now or never...Whereas online, it's my time and if I don't feel right about a purchase or whatever, it's so easy to walk away when I feel like it's not as easy when I'm in a store...Walking into a store I feel a much bigger compulsion to buy things than online...I've gone through all the trouble to get there for one thing. For another thing, sometimes you have to interact with another person to find what you're looking for and you're like, 'If I leave this place and I haven't bought something, then I won't feel like my journey has been worth anything and I've wasted my time.' And I don't like to feel like I've wasted my time. And so online though, if I decide not to buy something, it'll probably cost me three or four minutes and I just shut the browser down."* Kevin

As discussed in Chapter 4, online shopping enables people to defer their goals until they are actually prepared to fulfil them. The sense of being able to return to an online store as and when one feels like it and to take one's time to mull over an online purchase is absent in conventional shopping.

> *"I very often save pictures on my desktop and show them to my fiancé like, 'What do you think of those shoes? Do you think those shoes are cute?' And that's kind of nice because you know it's always available. You could always come back. It's not like when you're in a store. It's not like now or never. Like you know with the website, tomorrow it'll still be there."* Elaine

Ironically, although online shopping is often accused of infringing on the privacy of its consumers, it may actually allow consumers to enjoy a level of privacy and anonymity which they cannot enjoy in conventional shopping. This was what Susan had to say in relation to the purchase of clothing.

> *"...partly because I'm tall and large and I don't fit nicely into a lot of standard sizes and then I don't enjoy sitting in a dressing room trying on twenty pieces of clothing. That's really annoying. I would much rather buy it by mail or online, having it come to me to try it on. If it doesn't fit I'll send it back."*

Online shopping can therefore provide an unsurpassed level of privacy. Rather than having to endure the less than pleasant environment of a department store dressing room, Susan can try on the clothing in the comfort of her own home which could actually lead to enhanced consumer satisfaction. This anecdote also goes against the conventional wisdom that online shopping is ill-suited to the sale of experience goods like clothing.

Given the absence of other human interacting parties and the low time and energy costs involved in online shopping, online shopping therefore affords much shoppers much greater autonomy and anonymity than conventional brick-and-mortar shopping does.

5.1.3 Experiential pleasures

Another manifestation of online shopping as a leisure activity is that some interviewees derive pleasure from it through daydreaming about the products and services which they come across online. Based on our understanding of the social psychology of material possessions, material possessions are imbued not only with functional value but also symbolic value. They have both a public and a private meaning for their owners (Dittmar 1992; Richins 1994a). Not surprisingly, given the value-laden nature of material possessions, daydreaming about material acquisitions has been shown to offer consumers stimulation and enjoyment as consumers contemplate the acquisition, eventual ownership and utilisation of these material possessions (Caughey 1984; MacInnis and Price 1990; Fournier and Guiry 1993). Online shopping appears to offer infinite possibilities for daydreaming. Online stores are "open" around the clock and consumers can look for virtually any product or service which interests them and to do so

with complete anonymity. Whereas hiring a private jet or a remote island villa seems like an impossible dream, the ability to see such luxury services being offered online can give online shoppers a vicarious thrill. Before the advent of online shopping, many products and services were exclusive and inaccessible but are now "available" at the click of a button.

Indeed several interviewees admitted to fantasising about products and services, albeit more affordable ones. Here are some of the interviewees' responses to the statement, "I daydream about the products and services which I come across when I shop online":

> *"Yeah, that's true. Because I would be saying, 'God I wish I had that, I wish I had that, I wish I had that.' Basically it's like you see where certain things that you saw were nice and could look nice in your apartment so yeah, there's some daydreaming that goes on. When I go looking for houses, I'm a realtor so I go online looking for houses for other people. My house is nice but sometimes I see even nicer houses. So you know, there's a little fantasy that goes on."* Jocelyn

> *"I will sit and think, 'What will it be like to own an MP3 Player? What will it be like to run with an MP3Player and be able to shake it and it doesn't make any noise, you know, it doesn't skip'."* Kevin

> *"...very often, I will look for things that...are just totally luxury websites. Things I could never afford. I look at their things and get an idea of what's available and say, 'Look at that. They've got an old dark wood table. I've got an old dark wood table but they've put this white china on it which looks so much better. I should try that.' So I very often love getting inspired with ideas for decorating or finding like that would cost $400 but I could do that for $10 if I just spend an hour working on it."* Elaine

> *"Yeah, I think I definitely would say that I daydream about products especially since major product purchasing, I tend to look at them, then price compare and go home and think about it more. And so like I definitely thought about my Handspring visor for like three days straight, whether or not I want it, is it just a glorified address book, what if I don't like the calendar feature, how cool would I be if I actually had a Handspring. So I definitely thought about all of that. I definitely had a thrill thinking that I was gonna have a cool new toy. And so I definitely have to say I definitely daydream about the products and services."* Nicole

The interviewees' daydreaming seemed to span a range from "planful" fantasy activities which are more exploratory to "pure daydreaming" fantasies in which remote

possibilities are pondered (Fournier and Guiry 1993, p. 353). While consumption-related daydreaming is generally viewed positively, daydreaming about unattainable things can lead to feelings of frustration and low self-esteem (Rhue 1987). Nonetheless, it appears that online shopping gives consumers many opportunities for daydreaming about material goods and that daydreaming while shopping online seems to evoke positive emotions in the shoppers.

5.1.4 Smart-shopper feelings

Shoppers also derive pleasure from shopping in the form of smart-shopper feelings (Schindler 1998). Shoppers derive more value from a bargain when they feel that they are personally responsible for obtaining the bargain. They may have feelings of pride or of having won in a "game" against the seller or other shoppers. Smart-shopper feelings have a tendency to result in an increased likelihood of repurchase and credible word-of-mouth communications. Such feelings seem quite common in online shopping:

> *"Well I like it when I find good deals. Well whatever I define good deals as. I mean if my sandals were like $25 cos I thought that was reasonable, probably since it was the beginning of the season I would probably never find sandals in the stores for $25 and I wanted them now. And so even if they're like last year's style or something I didn't care, I liked them."* Nicole

> *"I: What exactly was it about that [online shopping] experience that made you happy?*
>
> *Kevin: The price difference – that was my number one...well first off, I was happy with finding exactly what I wanted. I had in my mind exactly what I wanted in an MP3 Player and I found it for that price which I never dreamed I will. I never dreamed I would find exactly what I wanted for under $200."*

This prevalence of smart shopper feelings is possibly due to the fact that the online retail market is still rather diffuse. Consumers have to trawl through several websites before they can strike a balance between identifying a desirable product, obtaining a good price and locating a reputable store. As a result, when online shoppers secure a good deal for themselves, they feel a sense of achievement that they have made sense of what is otherwise an incomprehensible mass of websites. Indeed, there seems to be the positive image of online shopping as the preserve of the smart, price-conscious shopper:

"...the perception if any is that that's [online shopping's] the smart thing to do. So there's maybe a cachet with it that's a positive one." Nick

"They [my family] know that I'm doing it and they know that I'm frugal and that if I'm doing it, it must be to my advantage." Mike

"I would say [my family and friends] approve [of my online shopping] because we can often find good deals." Gabrielle

5.2 Ambivalence Towards Shopping Online

As discussed in Chapter 1, although there are many motivations for shopping online, there is consumer ambivalence towards it due to its concurrent risks. Indeed, there are many deterrents against shopping online, which has its own unique stress factors. At the most basic level, the speed of the Internet connection can be a source of annoyance. Slow connections result in impatience and ultimately frustration. This has implications for flow experience. Faster connections enable more images and text to be loaded within a given time and the rapidity of information transmission can lead to conditions which induce flow in the consumer. If the majority of online shoppers still have slow connections, they are more likely to experience frustration rather than flow:

"I don't like the long time it takes to change the screen sometimes. That can be tiresome...It's slow. I wish it would be faster." Jocelyn

There is also the stress of having to make sense of the massive and complicated Web environment, clicking from hyperlink to hyperlink to locate the information required:

"It can be annoying at times when it's slow or you click on a bad site and you spend five minutes or something on it then you realise it's not what I want, this is not where I should be." Tom

The complexity and technical difficulties of online shopping can also be a deterrent:

"I think most of the issue is that she's [my mother's] not comfortable with technology and she pretends like she's not sure it's safe but I think in reality she's not comfortable that she'd be able to figure it out. And then my brother who's older than I am and very intellectually savvy but not terribly technically savvy never buys online...his mind is like, it's such a barrier to figure it out. He'll take way longer to go to all these stores than it will be to figure it out and do it online. But he just has sort of a mental barrier." Elaine

Apart from these basic difficulties with shopping online, the principal deterrents against shopping online are discussed as follows:

5.2.1 Risks

As discussed in Chapter 1, the risks of online shopping have received considerable attention in existing research on e-commerce (Bhatnagar, Misra et al. 2000; Elliot and Fowell 2000; Vellido, Lisboa et al. 2000; Vijayasarathy and Jones 2000; Stark and Meier 2001; Ranganathan and Ganapathy 2002). Security risks were often cited as a concern not of the interviewees who were already adopters of online shopping, but of their family and friends who had not adopted it:

> *"I think my friends think it's perfectly normal. They're perfectly normal and that sort of stuff. I'm sure to some extent they do the same thing. My mother thinks that I'm going to get ripped off. She thinks, and I guess it's probably all people over the age of whatever, whatever age that is. My boss at work, he's always concerned that somebody's going to get his credit card number and all that sort of stuff."* Tom

> *"Most of my friends also shop online. No one else in my family does. They're very paranoid about the credit card thing, you know order security and everything. My mother goes online a lot. She's finally discovered email...I try to convince her to shop online...She's paranoid about it. I've explained the whole credit card thing to her and she's convinced that somebody's going to be going online and stealing her credit card. You know she's 56 and this is a new thing for her and she's only gone online in the last six to eight months...Oh my mother thinks I'm crazy. She thinks I'll be the victim of some amazing fraud sometime."* Susan

> *"My parents are scared of it. They know that I shop way more than I'm supposed to online, especially the travel part. But that's just my parents. My Dad does not trust the Internet for shopping. He loves his travel agent...things like that. But he does enjoy the Internet, he's getting used to it for information, for searching, things like that and for email."* Glen

The level of trust which a consumer has in an online store is positively related to the consumer's attitude towards the store and inversely related to the perception of risk involved in purchasing from the store (Jarvenpaa, Tractinsky et al. 2000). By extension, the lower the consumers' perception of risks in shopping, the greater their level of trust in online shopping as a viable shopping alternative. Trust has been identified as a key factor influencing human adoption of computerised systems (Muir 1997).The issue of trust in

online shopping has also received considerable scholarly attention (Jarvenpaa and Tractinsky 1999; Jarvenpaa, Tractinsky et al. 2000; Tan and Thoen 2000; Lee and Turban 2001; Lynch and Beck 2001; Roy, Dewit et al. 2001; Grabner-Kraeuter 2002). The following quotation expresses succinctly the complexity of trust between humans and online interfaces:

> *"[T]rust exists between entities able to experience good will, extend good will toward others, feel vulnerable and experience betrayal These psychological states in turn, depend on consciousness and agency...human beings have consciousness and agency. The same cannot be said of a technological system in and of itself"* (Friedman, Kahn Jr. et al. 2000, p. 36).

There is therefore a great disparity between the level of trust which a consumer expects and the assurance of trust which a faceless computer interface is able to provide. When consumers conduct a transaction with a brick-and-mortar store, they trust that the transaction will go through smoothly and that the product that they buy will indeed work as promised. In case of product defects or errors in billing, the consumer has the assurance that he can return to the store to seek redress. That is the basis of trust in everyday shopping in developed countries. When shopping is technologically mediated through the inanimate computer medium, complications relating to trust arise. Indeed, in extreme situations where online shoppers want to seek redress, mediated interaction with online stores via email will not suffice. "Direct" human contact is still preferred:

> *"I've had many problems ordering Martha Stewart and I keep going back. I've had three times where she's charged me more, where the receipt was three times more than what she said it was. And so the first two times I sent an email saying, 'You know, there's a mistake, it said it was $49 and I was charged $79. So please fix this.' But the third time I was angry. So I felt like I need to talk to a person. 'This is the third time it's happened.' You know. So just depending on how important I thought it was, the more important the more I'll want to actually talk to a person."* Elaine

> *"I was particularly annoyed at lowestfares.com 'cos I got a price from them and then the next day I saw a very significant, maybe $200 lower ticket by going to travelocity and so I called up lowestfares.com and said, "I thought you were the lowest fare." They say, 'We try to be,' and I say, 'Well I bought my ticket from you in good faith and yet there's this other one.' So I worked with them back and forth and they refunded my money in the end."* Nick

Individuals have different thresholds of trust for different activities and transactions (Tan and Thoen 2000). Consumers expect a higher level of trust in an online environment because there is no physical contact with the vendor. At the same time, consumers expect online stores to trust them when they complain about problems and issues. In a non-transparent environment where neither party is able to easily verify the integrity of the other party's claims, online stores and their customers need to have an understanding of mutual trust:

> *"I was sending my mum a birthday present and it didn't get there and I was shocked and I emailed them, they sent another one with UPS which is a higher, more expensive shipping method...and they sent it right to her and she got it and it wasn't a question of 'Are you lying to us? Are you sure you lost it?'...and they followed up with that and asked 'Have you got it?' and I said, 'Yes this is great'. You know...it's things like that where I know if I went to the store, and I said 'Oh it got lost' and they would say 'Well, you've got to wait, you've got to fill out this paperwork and so on,' and they probably don't believe you. So well, I guess there is that bias that they have to go the extra step, that online stores have to have better customer service and so in a way I'm exploiting that. But it's give and take. I think it's a trade-off. They're trusting us and we're trusting them."* Glen

Glen's experience shows that when dealing with online stores, consumers have higher expectations for customer service than they would with conventional stores. This is because the consumers' inability to see the store or its salespeople in person heightens their insecurity and arouses their suspicions. Hence online stores have to make extra effort to reassure their customers and win their trust. The 'burden of proof' as it were, is greater for online stores than for brick-and-mortar stores. There also seems to be the sentiment that if the consumer has already taken the risk of patronising the online store, the online store should reward these consumers for their venturesomeness by offering better service.

Applying Tan and Thoen's (2000) framework for understanding trust in online shopping and Lee and Turban's (2001) assertion about transaction trust, it is proposed that trust in online shopping comprises trust in the party which one is transacting with (party trust), trust in the control mechanisms which are supposed to enhance the security of the transaction (control trust) and trust in the medium, i.e. Internet (medium trust). Let us apply this trust framework to the interview findings. Online shoppers are unable to

fully assess party trust because the only "physical" evidence they have of the store's existence is its website. They are unable to see the store owners or the store merchandise. Instead they have to trust that what is represented on the website is accurate and credible. In such circumstances, consumers can become easily suspicious especially given the hype surrounding the dot com bust. Unless an online store has a proven reputation or is affiliated with an established store, it is unlikely to win the party trust of the online shopper. Indeed, some interviewees restricted themselves to shopping at famous online stores or websites of established brick-and-mortar stores or mail order companies:

> *"I do reliable companies that have been there. Not something off the wall. I'm not going to buy something from somewhere. Like QVC where I know and travel sites where I know. Unlike some of the other ones that I don't know that well. I've heard of people who have lost money on some of these travel sites. They buy things that don't exist. So that's why I'll mainly deal with like the airlines, or expedia.com or something like that."* Mike

> *"I definitely go by names. Like do I trust the retail catalogue or mail order already? Like Victoria's Secret, I know the store and I know the mail order catalogue so I felt really comfortable shopping online with them. And Old Navy and Gap I feel the same although something that I look for is the ability to track your order online and if stores don't have that, that's definitely negative...if it was a store I hadn't heard of like this new shoe store that I knew nothing about, if they didn't have a 'track online' function then I probably would have felt less comfortable ordering from them."* Nicole

Control trust mechanisms have been introduced to enhance trust in e-commerce. Such mechanisms include assurance seals like those of Verisign and the Better Business Bureau Online, which are supposed to indicate to the shopper how secure a particular website is. However, Tan and Thoen add that such control mechanisms only work if consumers understand a control mechanism. For example, if an online shopper has not heard of Verisign when he sees its seal for the first time, he could assume that it is a decorative element in the website or is the brand of software used in designing the website. Indeed, these control trust mechanisms were hardly mentioned by the interviewees as a trust indicator which they relied upon. Only one interviewee mentioned them:

> *"If it's a site I haven't been to before, I look at the certificate, to see when it was issued, to see who the authority was...Also I typically shop at stores that are somewhat well-known."* Nick

Another method of assessing trust is by the use of external criteria such as branding or product price:

> *"I wasn't interested in going to the manufacturer website namely because none of the brands seemed familiar based on the Yahoo search that had showed up."* Nicole

> *"No one will charge higher than the manufacturer. So based on that I can go to other places or if I have an idea of this is how much it is, and then if someplace is really expensive, and it's not on sale, I would really look twice. If it happens to be $200 cheaper, there's a reason for that. And I would look up 'why is it cheaper?'."* Glen

Indeed, this resonates with the findings of Smith and Brynjolfsson (2001) who concluded that in the online shopping environment where consumers have limited means of assessing the retailers' credibility, brands become especially important determinants of consumer choice.

Other interviewees did not use any formal criteria in assessing the trustworthiness of websites but based their judgements on the website's appearance and functionality:

> *"Partly I guess the quality of their site. If it seems to be an extensive well-designed site and not someone's mum and pop thing that they set up themselves. If it seems to be a professionally created site."* Susan

> *"I think when working on it, if there are problems, I would tend to not go back to it. Like how well it functions and even somewhat how professional it looks would affect me I think."* Gabrielle

> *"I kinda make a value judgement about the quality of the company by how good their website is, you know like how efficient it is, and the layout and if I like the design and it's pleasing, it makes me feel much more confident buying their products because I assume their design will be similar to their website. It's kinda like another window into how this will be."* Elaine

This supports the findings of Roy, Dewit et al (2001) and Lynch, Kent et al (2001) who established that the quality of a retail website's user interface plays a key role in

establishing trust with the consumer and positively influences purchase intentions and customer loyalty.

As for medium trust, many online shoppers are still wary of the Internet and are extremely concerned about its perceived lack of security given the negative publicity over hacking, viruses, misappropriation of financial details and the sale of customer profiles to third parties. Since the introduction of e-commerce, consumers have been dogged by concerns of breach of security, invasion of privacy and the bankruptcy or premature closure of online stores.:

> *"...a lot of those dot com businesses are selling a product and when they go out of business, what recourse do you have for exchanging or refund or dealing with the problem or calling for help when they go out of business? That's a bit scary cos you can't go out on the street and take it back when they're online. I wish them much success that they make it but it's a bit distressing to know that they fold quickly."* Pam

> *"...that's the risk of going with these dot coms. They might close on you. One day or the next. I mean I don't know what they do when they're closed."* Gabrielle

In that sense, one silver lining to the dot com bust could be the closure of the less established online stores and the stabilisation of the online retail market as a whole. In response to the question of how the dot com bust had affected his confidence in online shopping, Nick's response was:

> *"Increased it... because I think there has been a weeding out. The stronger ones survived."*

Evidently, party trust, control trust and medium trust are difficult to achieve. Online shoppers use a wide variety of methods to assess the trustworthiness of an online store. Online stores have little choice but to ensure that they have a range of different indicators of trust. They also need to be especially careful in the quality and presentation of their information as consumers are quick to regard mistakes in product information as indicators of unreliability and lack of trustworthiness. Consumers are less likely to give online stores the benefit of the doubt than they would a brick-and-mortar store which they can see in person.

5.2.2 Personalisation and its unintended effects

The use of personalisation and customisation software by online stores may have a negative impact on developing trust with the consumer. Personalisation software, commonly in the form of "cookies", has enabled online stores to greet their customers by name, collate their preferences and suggest products based on these preferences. Online stores boast of how they can offer a high level of customised service to its consumers. However, the efforts of online stores to personalise their customers' online shopping experiences seem to be greeted with cynicism or indifference.

> *"...I don't feel like I'm welcome in particular because they call me by name. It doesn't make me feel more comfortable. I just see it as...a ploy that companies make you feel more comfortable to try to say, 'We like you. We care about you. Here we'll call you by your first name.' I think it's just one of those things that companies do just to gain business. I sort of look at it rather cynically. I mean I don't take any offence to it. I just ignore it."* Ian

> *"I'm used to it. It's corny but it's okay... I'm not bothered by it".* Mike

> *"I notice it but it doesn't really affect me. I don't go to that store or that site specifically because they greet you by name or I don't shy away from them either for that reason."* Joe

> *"I'm pretty neutral about it. I mean it doesn't weird me out that they know I'm there. I'm pretty neutral, I don't care either way."* Nicole

Others feel that the online stores' efforts at personalisation is part and parcel of running a good business:

> *"Yeah the store is tracking you. They know that you spend money there and they want you to come back. So of course they're gonna try and get as personal through the computer versus face to face. I mean it's just like me going to the regular coffee shop down the street for example...She knows what I want, "How are you doing?" She knows my name. It's the same thing. The only difference is this is through the computer. Yeah they're supposed to be tracking. That's business."* Jocelyn

> *"I don't really care that Amazon's tracking what I'm buying because I think that is just good, good business and I don't fault them for being a good business and trying to find out what their customers want."* Kevin

Only a minority of the interviewees professed to like being greeted by online stores:

"I like that. It's personal...It makes you feel like they remember who you are." Jocelyn

"It definitely gives me a sense of, 'Oh this is my store. They know me.'...In the back of my mind, sometimes I get a little worried about like are they gauging these prices based on my past behaviour...like part of me really enjoys how they can customise things based on what I've bought before and part of me thinks, am I gonna get screwed? Is there any way they could be like upping their prices or not showing everything because of preferences?" Elaine

Elaine's comment is interesting because it shows that while personalisation can affect the user positively, it can also backfire by arousing suspicions and by underlining the intrusiveness of the Web medium:

"Mildly irritated I guess. I don't like it. I feel that it's mildly creepy like they're tracking me, like I'm being spied on." Susan

"The first time I ever logged on to the Internet, somebody sent me an instant message...I would see things...like it said 'Hi Tom' or something and I would feel so cool like I was part of some secret society or something. But today, it just means that I know these people know I'm out there and they can market to me or they can track me. So if it makes me feel anyway today, it makes me feel uncomfortable like my privacy is being intruded on or something. But not really, I don't really have angry feelings or anything like that." Tom

"I look it at and I laugh and I think 'Oh it's the cookie'. And I'm not like, 'Oh, how charming'. I think that's ridiculous and it also reminds me that I'm logged into this computer so if it's a public terminal then I'll log myself out. It's sort of a reminder." Glen

Online stores need to therefore balance the benefits of personalisation against its costs. Obtaining informed consent from the consumer is one way. When a consumer gives informed consent for an online store to do something potentially invasive, such as installing a cookie in the consumer's computer, the consumer feels less violated. Even when a security breach *does* occur, the consumer is likely to feel that he has played a contributory role in subjecting himself to a security breach.

"I get annoyed with sites that put the cookies on without bothering to mention it. ...overall I prefer a site that asks, that tells you it's placing a cookie. I occasionally look at online surveys and things and if they want too much information or if they want to place a cookie, then I don't fill them out. It's not worth it to me." Susan

"Might be to a certain extent better if they said, 'Who are you? and I said who I was and they said, 'Oh yes, we recognise you, we know who you are and so, welcome.'" Nick

Nonetheless, many interviewees have simply set their computers to accept cookies because the process of giving consent is too laborious given the frequency with which cookies are installed by websites. Some interviewees did however have a habit of periodically erasing the cookies from their computer hard drives.

5.2.3 Impulse purchases

The potential for making impulse purchases online can be another cause of consumer ambivalence towards online shopping. This is because opportunities for making impulse purchases are increased with the heightened ease, convenience, unlimited access and wider product variety of online shopping:

"...because online shopping is usually available around the clock. And there's nothing to prevent me from buying something that, if I wanted to buy an airline ticket at three in the morning I can do that. The freedom of letting you go that far, the accessibility, the increasing accessibility, is dangerous too. If all stores were open 24 hours, we would probably shop more but they aren't. Stores are open 24 hours online and it's a very conducive environment for me, so in that manner I probably end up shopping a little more." Glen

"So I headed to the end to see if they have any shoes. So, scarves instead, and I'm a sucker for scarves and I think I honestly like, 'Let me quickly get past the scarves or I'll want to buy them.' Then I saw this bag which I completely don't need but I saw it in the store once and I thought I'd see what it looked like. So I clicked on it." Elaine

Online shoppers have to therefore resist the temptation to buy something simply because the product is there on the computer screen and placing an order for the product is such a simple process. The interviewees were queried on whether they had made online impulse purchases before. The distinguishing qualities of impulse purchases as identified by Rook (1985), i.e. a sudden and spontaneous desire by the consumer to act, a state of psychological disequilibrium, the feeling of psychological conflict, a diminution in cognitive evaluations and a disregard for the consequences of the impulse purchase, were present in the online impulse purchases which some of the interviewees had made:

"Jocelyn: Yeah I spent more money than I was supposed to. I bought a bra from Victoria's Secret. I mean I went in there to get one particular thing 'cos it was on sale and they had these nice bras and before you knew it, I spent $200 and I only went for one thing. But I like Victoria's Secret stuff so I got caught up in the moment.

I: And how did you feel when you did that?

Jocelyn: I was upset after, not during the process.

I: How did you feel during?

Jocelyn: During I felt great. I was like yeah, I like this and I like this and I was happy and then I realised that I spent what I really couldn't afford to spend but during it was great.

I: And then after that how did you feel?

Jocelyn: I went down. I was depressed."

"When I was shopping for it, I was like my heart was racing, 'I shouldn't be doing this'. And I had to rationalise but also, I made a $200 impulse buy at Bestbuy and it was the same kind go thing, I shouldn't be doing this, 'the money...blah blah blah'. I did it anyway. And I ended up convincing myself to be happy with it anyway, justify the spending money." Kevin

As can be seen from the above quotations, impulse purchases made online do not differ much from impulse purchases made in brick-and-mortar stores. Ironically, Jocelyn claimed to prefer online shopping because it made her more resistant to impulse shopping. This was her response to why she would opt for online grocery shopping if such a service was available:

"I would only [opt for online grocery shopping] because you spend about two hours in the store versus sitting at home in your spare time. I don't have to like do a grocery list and I can look and I know what I need. I mean you do a grocery list sort of but the other thing online shopping does too is keep you in budget. You see every time I go to the grocery store, they have a big old thing right on the corner of the aisles. That's what attracts you. You didn't go to the store for that but you end up buying it because it says 2 for $5."

Indeed, certain features of online shopping may actually increase the likelihood of impulse purchases, such as Amazon's one-click service which stores the customer's credit card and shipping information from a previous purchase so that a product can be

bought with just one click. The consumer need not key in his details each time he makes a purchase:

> *"But I suppose if I was going to buy something frivolous that was a few hundred dollars and I was feeling a little bit guilty about it...I suppose if it popped my credit card number up there, and everything, my name and address and all that stuff, it might be a little easier to click that button because you're not spending that extra two minutes to key in your name and actually think about it and feel more guilt."* Tom

With such features, the ease of completing the transaction can increase the likelihood of impulse purchases being made as the online shopper has less time to deliberate on his purchase.

5.3 EFFECTS OF MEDIATION

The technological mediation of shopping by the Internet also has several effects on consumers' mental accounting processes, potential for deriving social gains from shopping and propensity towards making impulse purchases.

5.3.1 Mental accounting processes

The concept of mental accounting suggests that consumers have different price thresholds for different categories of products and different store genres (Christensen 1989). It has been investigated by consumer researchers for the purposes of product pricing by merchandisers and retailers. It is interesting to explore how the technological mediation of shopping affects the consumer's mental accounting processes. Mental accounting or the psychological purse refers to the mental price threshold which a consumer has for different products made within different retail environments (Kojima 1994). While it is possible that the psychological purse of the online shopper can actually increase because he does not engage in the physical act of withdrawing money from his wallet, the findings seem to show that the psychological purse actually decreases. This is due to the online shopper's inability to ascertain product quality online and his inability to confidently assess the trustworthiness of an online store:

> *"...online I think I tend to research more than I do when I'm actually in the store because when I'm in the store I can see something and I have a feeling whereas*

> *here I'm a bit more unsure so I want to double-check, I want to maybe read what someone else said about it or see whether there's somewhere else where I can get it cheaper."* Gabrielle

> *"I think sometimes I'm willing to pay more in a store because I can see it and I get a better sense of its quality."* Elaine

At the same time, the psychological purse also decreases because of the ease of comparison shopping. Online shoppers have become more discriminating in how much they are willing to pay:

> *"I'm a lot less likely to be scammed I feel in a product because I shop online, like I'm not glued to outpost.com. Like if they have something that I'm interested in, I'm like wait a second you know. And I check one of these other sites to check, at least one of the other sites to see how much something is."* Kevin

> *"I just feel that the Internet is a good resource for price comparison and I won't feel comfortable going to a regular store now, purchasing something without checking online first."* Nicole

Conventional shoppers in brick-and-mortar stores do not enjoy such ease of price comparisons. Once they are in one store, the energy and time required for them to visit another store to compare prices becomes a disincentive for comparing prices and as a consequence, they are less discriminating in the prices which they are prepared to pay.

Another reason that the psychological purse of the online shopper decreases is the ease of access to money management devices. The online shopping environment is distinct from conventional retail stores because for an increasing number of shoppers, the online shopping environment is also the banking environment. This has to do of course with the advent of Internet banking. One might argue that there are already banks and automated teller machines in malls, which also merge the shopping and banking environments. However, none of them does so quite as seamlessly as the Internet does. The shopper merely has to switch from one Internet browser window to another to leave the shopping environment and enter the banking environment or vice versa.

Take the example of Elaine. While Elaine shops online, she also checks her bank account online, thereby preventing her from spending too much money on her online shopping.

"...often when I buy, I'll go ahead and open another window and check my bank account, and so I'll have an immediate understanding of how much money I have at that moment and if this purchase is wise or not. So in some instances, it's almost smarter that way."

In the case of Nicole, she keeps tabs on her financial situation by using a spreadsheet on her computer:

"Well usually like if I'm shopping at home, I'll be in my apartment, I'll have my computer, I'd have my budget on my computer so if I'm feeling guilty, I can look at how much money I have left at end of the month. So that's probably a good thing cos it's a reality check you know about how much I can actually spend this month."

Compare these scenarios to that of the brick-and-mortar store. In the latter scenario, the conventional shopper would either have the product in his hand or before him. The sense of immediacy and the pressure on him to make a decision is palpable. The online shopper on the other hand can decide now or later whether he wants the product on the screen or not. Being in a store, the conventional shopper would be less able to calmly take stock of his finances compared to the online shopper who is seated at home or in the office. The conventional shopper does not even have his financial information at his fingertips except perhaps in the form of a bank receipt in his wallet which he is unlikely to look at while shopping. Therefore, in online shopping, the consumer has greater control over the purchase situation than in conventional shopping and this can impact on consumers' psychological purse for the two retail environments.

5.3.2 Social dimensions of shopping

It has been argued that shoppers welcome the social contact which they have with other shoppers and retail staff (Tauber 1972; Westbrook and Black 1985). Indeed, even when the act of shopping is mediated by technology, for example in the case of telephone and television shopping, shoppers can also derive social gains (Stephens, Hill et al 1996; Grant, Guthrie et al 1991). However, online shoppers do not appear to derive either social or parasocial gains from their online shopping. Any social interaction which the interviewees engaged in while shopping online was with people whom they already knew offline. This absence of a social dimension to online shopping is due mainly to the purposeful and goal-directed nature of online shopping. Online shoppers do not shop

online for social gains but to fulfil some need or goal. Neither did any of the interviewees experience parasocial gains similar to those experienced by consumers who engage in television home shopping.

While the process of shopping online can be rather emotional as with conventional shopping, most online shoppers seem incapable of emotional involvement with specific online stores. Xenikou, Hammond and Svennevig (2000) assert that the World Wide Web is a medium which is unable to induce emotional involvement in its user. Indeed, most of the interviewees did not seem to feel much loyalty to their regular online stores. Instead, they have an almost mercenary attitude towards online stores. The interviewees were asked what they would to help if an online store which they patronised regularly was on the verge of financial collapse. These were some of the responses:

> *"I would do nothing because if they're going out of business, it means that somebody's doing it better. And I just need to find out who they are."* Tom

> *"I don't feel that degree of loyalty. They're very convenient. And if I found another place on the web that was just as convenient, I would patronise them too. Amazon – it's not an emotional loyalty, I don't have a sentimental feeling about Amazon. I just think it's efficient to shop there."* Susan

> *"Well I guess I don't see that I could do anything other than that I've been a regular customer of theirs and so if they're gonna fold, I probably would be concerned. I wouldn't want to buy any more from them cos I might not get it. So I might be the opposite of loyal if I found that they were in trouble."* Nick

> *"I mean I'll tell people about outpost.com but I won't tell them that just to keep the company afloat. Like if they go under or if Amazon goes under, it'll be like you know, oh well, there's always Barnes and Noble or there's always buy.com..."* Kevin

A small minority entertained the possibility of helping these stores in need but professed ignorance of any concrete forms of assistance which they could offer:

> *"I don't know what I could do to help them. I'd be disappointed because of the convenience. But I don't know what I could do to help them."* Jan

> *"I wouldn't do anything monetarily for sure but I don't know, I don't know what avenue there would be."* Elaine

Only a small minority of the interviewees admitted to having online store loyalty of any sort. Most of them were dismissive of the possibility that they could be loyal to an online store:

> *"...I don't feel I have any personal vested interest how these [dot com] companies are doing. I feel really like I'm using them (laughs) more than I would with a real store that I had gone to often. Like I feel rather detached from this."* Gabrielle

At the same time, some interviewees did feel that while they would do nothing to help an online store that was collapsing, they would help a brick-and-mortar store in a similar plight. This inability to experience online store loyalty is probably due to the fact that online stores lack a human face:

> *"I mean if I found anything that was better than say half.com, or Amazon...I wouldn't feel bad if I went over to some other company. I mean it's just, I don't feel a particular affinity for a company just because they work well. And because I can get things that I want from them...I kinda figure that a company would be more than willing to ignore me or to choose somebody else aside from choosing me so I don't really feel any sort of bond between myself and a place where I go to shop... I think it probably would be a little different maybe if I knew the people who worked there...but on the Internet, you don't really get to know anybody. And the only way you could is if you deal with somebody at customer service but that's usually by email and it's usually very curt, formal, sometimes even rude message and it's not really the same thing. No human contact at all on the Internet..."* Ian

Walther (1996) argued that the relative failure of current computer shopping venues has been due to the perceived impersonality and the absence of viewer relationship development. Indeed, the key difference between online shopping and television home shopping is that online retail sites lack a human face to front the store. In television home shopping programmes, the products are presented by personalities who develop loyalty and affiliation from their viewers over a period of time. In most online stores, products are simply presented by themselves, without introductions or endorsements by a human spokesperson.

Online stores are merely online product directories rather than virtual storefronts with virtual salespeople. The products speak for themselves. On occasion, the CEOs of some online retail websites post welcome messages for their customers but these are seldom prominent and neither are they intended to be. Instead, they are usually located in

an obscure "About Us" or "Corporate information" section of the website. Interestingly, Elaine was the only interviewee who could unequivocally claim loyalty to an online store and her loyalty was to Martha Stewart online:

> *"I'm very brand loyal with my online shopping. Much more so than in real shopping. Martha by mail.com...Sometimes with Martha Stewart I do feel a little obligation to buy things I have to say."*

Elaine's loyalty is possibly due to the fact that Martha Stewart, an actual person and a famous celebrity at that, fronts the store and becomes a focal point for consumer affect. Consumer psychology has conducted extensive research into the effect of celebrity endorsements on the recall, recognition, attitudes and purchase intentions of consumers (Atkin and Block 1983; DeSarbo and Harshman 1985; Kahle and Homer 1985; Wilcox, Murphy et al. 1985; Speck, Schumann et al. 1987). Kahle and Homer (1985) established that attitudes and purchase intentions are positively related to the attractiveness but not the likeability of the celebrities. Wilcox, Murphy and Sheldon (1985) demonstrated that the physical attractiveness of celebrity endorsers influence the affective and conative dimensions of attitude but not the cognitive dimension. Given the wide range of online stores which do not have human spokespersons, a celebrity endorsed site may be better able to foster parasocial or even social relationships with its consumers. It is especially in the online environment when the shopper cannot confidently assess the veracity of a store that a human spokesperson may help to instil trust and foster loyalty in the consumer.

Much has also been made of online communities and of the close social relationships developed within them. Hagel (1997 pp.18 - 24) argues that the appeal of virtual communities lies in their ability to address the four basic needs of people: interest, relationship, fantasy and transaction. Virtual communities enable people with shared interests but of diverse backgrounds to share experiences with one another. Many writers have propounded the viability of online retailers maintaining or supporting online communities for the purposes of online marketing (Hagel and Armstrong 1997; Wise 1997; Mansell, Schenk et al. 2000). Virtual communities which share information on specific subjects are thus natural venues for targeted online marketing. However, the interview findings show little evidence of the average online shopper cultivating an

interest in online communities. Only one of the interviewees had participated in a virtual community and had only done so because she knew the members personally and did not just interact with them through the Internet.

Nonetheless, let us consider the experience of Ian who was in fact part of the loose community of eBay – a community of shoppers who bought and sold merchandise online using eBay as the market place. eBay is essentially an online auction house where items are auctioned and bid for online. It started out initially with a small following but soon expanded. Indeed, eBay has expanded so much that any sense of community which could or would have been fostered is now lost:

> *"Well it's hard to think of eBay as a community because it's just so large and it's also impersonal at the same time. Even though you leave comments about other people, I notice that it becomes a little bit impersonal because the people who leave comments about others, it's not that they're rude or offensive or anything. It's just that their comments, well they would say the same thing, 'Great eBay buyer', 'A-plus plus plus plus' and a lot of exclamation marks and we're just down to the point where the praise doesn't mean much because you'll say it anyway. But I don't think I've ever run across, I mean I haven't sold too many items there and...I don't usually see the same people. I'm not really sure if I had to compete with the same person twice at getting something. I've not sold anything to the same person twice. I'm not even sure if I've bought anything from the same person twice. Just because there are really so many people there. I don't know how many people there are and it's expanded."*

This comment has interesting implications for online stores which aim to build relationships with and amongst their customers. While online shoppers can appreciate participating in an online community, they are averse to communities which are so large that intimacy and closeness cannot be achieved. The solution could perhaps be the development of small sub-communities which centre around shared interests, geographical proximity etc.

At the same time, most of the interviewees were disdainful of the venues where online communities are usually fostered, such as Internet chat rooms. The image of these chat rooms was usually a negative one, where trivial matters were discussed and the chat room participants' views were not considered credible.

"Yeah. I find almost always the discussion groups are bothersome because I'm really into grammar (laughs) and I can get over it but you read so many...and everything's so wrong. I just get to a point where I'm like 'I just can't even trust what you're saying.' You know like, 'If you can't spell, then I'm not interested in what you're saying.' So I've had a couple of experiences like that or sometimes for wedding things, there'll be advice on how not to do this. But I find that they start off okay but they sort of degenerate into the totally off-topic or it's basically just people bitching ...." Elaine

"No I don't do chat rooms and message boards. Forget it. No way. Huge waste of time." Susan

The findings suggest that there are several factors which work against online communities being developed into avenues where online shoppers can derive either social or parasocial gains.

5.3.3 Conditioned impulse purchases

While impulse purchases can occur in online shopping as discussed in section 5.2.3, online shopping also seems to have the potential to induce "conditioned" impulse purchases due to the possibility of goal deferment. Given their ability to visit and revisit online stores without much time or cost expenditure, consumers who are eyeing specific products are prone to revisiting these online stores, in the hope that the product prices will be lowered. Consumers then develop a mental threshold perhaps in the form of "if the price is below $X, I'll buy it" regardless of whether they really need the product or not. They then bypass the decision-making stage because the impulse to buy has already been conditioned by the expectation or hope of a price reduction. The situational variable of the price reduction may result in an impulse purchase:

"I find stores that I liked in person but are often too expensive, I think well if I regularly go to the website I can catch the sales. You know I can see if there's something like really cute but less expensive than usual." Elaine

This phenomenon of the conditioned impulse in online shopping may be exacerbated by devices such as the online store "wishlist". People are trained to construct wishlists in their youth especially around special occasions such as birthdays and holidays (Belk and Zhou 1987). These wishlists usually contain items for future purchase or items which are beyond the reach of one's present buying power (Brownlie and Horne

2001). Many online stores offer a "wishlist" service where consumers can collate a list of products which they desire, either for their own record or for friends and family to access this list for gift-giving purposes. These wishlists are also used by online stores to alert consumers to the fact that particular items on their wishlists are available at special discounts and so forth. Upon receiving such email alerts, the consumer may engage in an impulse purchase because the product price is lower than his mental threshold price.

The conditioned impulse purchase is also likely to occur in conventional shopping but again, the process would not be quite as seamless. The consumer who is eyeing a certain product in a particular store would need to make the extra effort of going to the store repeatedly, in the hope of a price reduction. This would entail considerable time and energy expenditure. At the same time, the store is unlikely to be aware of a consumer's desire for that product because brick-and-mortar stores do not have a practice of collating customers' wishlists. As a result, the store is unable to alert the customer to a product discount. Suppose however that the store *does* collate customer wishlists. If the store alerts the consumer through an email message or a phone call, the consumer would be unable to make the purchase immediately and would still have to make his way to the store. In the time between receiving the alert and going to the store, the consumer would have a few moments to re-consider whether he needs that product or not. The conditioned impulse purchase is thus less likely to happen conventional shopping than in online shopping.

5.3.4 Gender differences

Gender differences in online shopping behaviour were not particularly distinct amongst the interviewees. Perhaps, given the anonymity of online shopping, gender roles and gender role attitudes did not appear to influence the interviewees' online shopping behaviour. The interviewees, whether male or female, mostly shopped for items for their own pleasure rather than for household benefit. However, men were just as likely as women to mention the functional benefits of online shopping.

> *"It definitely helps and saves time. It helps me do the comparison shopping and figuring out, learning about the product before I look at it. There's something that I can look at. I can actually eliminate things, eliminate trips. I can say, "I know I*

don't want this particular model." If they have this I'll look at it. If they don't I won't go and waste my time." Mike

"In general I'm pleased with it. I think that I've heard horror stories about the sites where the stuff you get isn't exactly what you wanted. I usually know I want. I like the fact that they keep you updated about what you order. And they ship very quickly and I've never had any trouble overall with my credit card." Jan

"But I like the fact that I can do it when I want and I like the fact that I can actually get descriptions of things and then if I'm very interested and concerned about some aspect, I can usually go somewhere else or maybe right there find people's comments and reviews or whatever. So from an informational standpoint I love it." Tom

"It's bad for browsing but it's good for pinpoint things and a lot of my shopping does tend to be very pinpoint." Susan

Campbell (1997) asserts that while men see shopping as work and a routine activity, women see shopping more as leisure and an occasional recreational activity. This was not evident from the interviews. The men seemed to enjoy shopping online as much as the women did. Indeed, both the men and women were just as likely to appreciate the recreational value of online shopping. However, women were more likely than men to mention the experiential dimensions of online shopping such access as the product images and interface design.

"I do find it entertaining to shop online just to see what they offer and to see how they set it up, what the words look like, what the pictures look like. It's somewhat interesting to see how people display their sites. You know just from site to site it's so different." Pam

"Sometimes I'll daydream more about how it was displayed and it's like, so maybe it's a birdcage, but it's a birdcage in this beautiful garden. And it's like I don't need a birdcage. A birdcage would be ridiculous. But sometimes I will, like when I'm in class I'll be like, 'That garden with that birdcage was nice'." Elaine

"I guess it's just the thrill of pressing "send" and then I really like getting mail." Nicole

For men, the recreational value was more likely to be derived from having obtained good deals online, as if shopping online was a game and a challenge to their web navigation skills:

"...it's not the actual act of buying. I think I find more enjoyment with the window shopping, the browsing, the comparison, and if it's a great deal and I buy it then there's definitely satisfaction there." Glen

"At times I find it entertaining to find the best price... Yeah you feel good that you find a good price. If you just plug in and you buy the first thing you'll be frustrated when you find that if you looked at the next site you could have bought the same product for 20 per cent less. It picks me up when I'm successful buying something." Mike

"I usually shop when I'm looking for something and if I find what I'm looking for and it picks me up just like it would if I was in a regular store, that I found a good deal." Tom

The women were also just as likely as the men to be innovators or opinion-leaders within their peer groups in terms of online shopping adoption:

"I feel like I'm one of the best online shoppers I know. Um...people usually come to me when they want to know...like even Glen, which I felt was a big compliment, asked me, 'When you buy your electronics, where do you usually go?' You know? And I think that's just because I shop, relatively, a whole lot online. And I've been doing it since my sophomore year of college...." Kevin

"I've probably regularly shopped online at least for five years cos my father works for a computer company so we've had the Internet in our house for like 10 years, I mean as soon as it came out... I think they [my friends] consider me the most online friendly person and very often they'll ask me to recommend places. They're like, 'I'm looking for a book on how to do this. Where should I go?' and I'll be like, 'You can check this, this and this.'" Elaine

5.4 CONCLUSION

This chapter discussed how the technological mediation of shopping by the Internet affects the everyday process of shopping. The motivations for shopping online were studied. It was established that online shopping has become an alternative form of recreation for consumers. Often conducted independently, online shopping becomes a form of private indulgence where individuals enjoy anonymity and even engage in daydreaming and fantasising about the products which they come across. They also enjoy considerable autonomy as it is free from the social pressures and time pressures of conventional shopping. Consumers also derive pleasure from shopping online when they successfully locate attractive bargains. Smart-shopper feelings from locating bargains

seem to be heightened online as shoppers feel a sense of achievement at having made sense of the unwieldy realm of the World Wide Web.

The causes for consumer ambivalence towards shopping online were also discussed. The issue of risks and trust were explored and it was concluded that conducting an everyday activity such as shopping through a faceless inanimate medium makes the shopping process fraught with risk and uncertainty. The different means by which online shoppers assesses the trustworthiness of stores was discussed. It was established that online shoppers use a range of methods to assess trust and tend to overlook concrete trust guarantees offered by the stores. This chapter also discussed how online stores' efforts at customising the online shopping experience through personalisation devices can be counter-productive and impact negatively upon trust. They raise the alarm of consumers, reminding them that they are being tracked by the online store, rather than making them feel special and welcomed by the store. The potential for making impulse purchases online was suggested as another possible cause of consumer ambivalence towards online shopping.

The effects of mediation of shopping on several dimensions of consumer behaviour were also studied. With regard to consumers' mental accounting processes, it appeared that consumers' psychological purses shrink online due to the inability of online shoppers to see the product, the ease of comparison shopping online and the integration of the banking and shopping environments online. and the possibility of conditioned impulse purchases occurring online was discussed. It was also concluded that online shoppers do not derive either social or parasocial gains from online shopping nor develop social or parasocial relations with online stores. It was suggested that this is due to the facelessness of online stores and that introducing a personality to front these stores may help to establish loyalty and heighten the sense of trust. Similarly, online shoppers do not appear to participate in online communities, much less derive social gains from them. Instead, there is a dismissive attitude towards online communities and the chat rooms where online communities are usually fostered. Gender differences in online shopping behaviour were also analysed and differences were noted in how men and women derive pleasure from the experiential aspects of interaction with the store interface whereas men

derive pleasure from obtaining good deals online. However, men and women were just as likely to cite the functional benefits of online shopping.

In the next chapter, the quantitative analysis online shopping actions will be discussed. The design and administration of a survey on the structural, cognitive and dispositional dimensions of online shopping actions will be described and its results assessed.

PART III - QUANTITATIVE ANALYSIS OF ONLINE SHOPPING ACTIONS

6 BACKGROUND AND METHODOLOGY

In Chapter 4, the key structural features of online shopping actions, the cognitive processes guiding them and the dispositions influencing them were discussed in detail. It was concluded that these dimensions can be used to generate a taxonomy of typical consumer online actions and from this, a typology of online shoppers can be produced. This chapter begins with a broad review of different methods of classification, and outlines the reasons for adopting the numerical taxonomy method. It then continues with a brief review of existing typologies of online shoppers and explains why such typologies have been found wanting. Principally, this chapter discusses the different dimensions which can be used for typologising online shoppers and how these dimensions will be operationalised in a survey. The chapter will conclude with the design and administration of the survey.

6.1 EXISTING TYPOLOGIES OF ONLINE SHOPPERS

Preliminary studies into online shoppers have devised a meaningful way of segmenting them. In the bulk of these studies, attention has mostly focused on consumers' demographic and psychographic data or on quantifying the activities which consumers engage in online. In the latter data mining approach, logfiles of data automatically recorded by website servers collate extensive quantitative data on the amount of time and money spent online, the types and number of websites surfed, responses to online advertisements and so on (Sen, Padmanabhan et al. 1998). However, such quantitative data does not shed any light on how or why consumers perform such actions. An approach which more closely approximates online shoppers' behaviour is through a numerical taxonomy of their typical online shopping actions.

However, studies which have attempted to study the actions of online shoppers have also been problematic. The range and number of online retail websites accessible to US consumers is overwhelming. Similarly, there is a large number of website design styles, translating into a mind-boggling variety of ways for online shoppers to interact with these interfaces. To classify online shoppers according to how they interact with online shopping interfaces becomes cumbersome because different interface designs

demand different modes of action. This situation is further compounded by the fact that some online retail stores also have a brick-and-mortar presence such that online shoppers can choose to conduct some of their shopping online and some of it offline, e.g. researching the product online but buying it offline.

Given these distinctions, studies have delved into which online shoppers buy products online and which shoppers still insist on buying offline (Harris Interactive 2000; Jupiter Communications 2000; ComputerScope Ltd 2001; Digitrends 2001; Pastore 2001). However, there are shoppers who will buy some things online and other things offline, e.g. buying a non-experience good such as a book online but buying an experience good such as clothing offline. As a consequence, the delineation between online and conventional shoppers cannot be distinct, i.e. online shoppers are also conventional shoppers while conventional shoppers are occasionally online shoppers. Studies which persist in dividing consumers into such groups oversimplify the matter and obfuscate our understanding of online shopping behaviour.

This thesis circumvented these problems by identifying empirically the dimensions which characterise online shopping actions, irrespective of whether the shopper chooses to complete his shopping transaction online or offline, regardless of the nature of the particular online shopping interface with which he is interacting and notwithstanding the properties of the product or service he is shopping for. These action dimensions were then investigated through a survey which queried respondents on how their online shopping actions typically vary according to these attributes. The survey results were then used to construct a typology of online shoppers.

6.2 METHODS OF CLASSIFICATION

There are different approaches to constructing typologies. A conceptual approach can be adopted whereby existing literature on a subject is reviewed to identify broad concepts. These concepts guide the *a priori* creation of a classification scheme. Data is then used to test the efficacy and adequacy of the scheme. A general profile of the subjects in each classification category is then drawn up. The profile can be either demographic, socio-economic, psychographic or a combination of all three. The typology

is therefore a pragmatically-designed classification for the schematic purposes of the researcher. Several consumer typologies have adopted this approach (Bellenger and Korgaonkar 1980; Moschis 1976; Sproles 1985).

Another approach is by numerical taxonomy, where classification is based on aspects of a situation which can be measured empirically (McKelvey 1975). Numerical taxonomy is often referred to as cluster analysis and the two terms are "virtually synonymous" (Bailey 1994, p. 7). A numerical taxonomy is based on scores on a set of variables for a group of individuals (Fox 1982; Herschel C. Hudson and Associates 1982). These scores can fall into the following data categories: numerical, ordinal, binary nominal or interval data. The numerical taxonomic procedure involves applying a clustering algorithm to gather similar subjects together and identifying meaningful groups of clusters in the clustering algorithm output (Romesburg 1984). Numerical taxonomies are thus empirically grounded and enable the researcher to study different dimensions of a situation. The numerical taxonomic approach avoids the *a priori* identification of concepts or categories – instead it allows the data to inform the classification. What often emerges is a novel classification scheme that is not based on any existing concepts. Hence, this technique is useful for studying a relatively novel activity such as online shopping, on which there is a paucity of established academic research. This thesis adopted the numerical taxonomic approach for the afore-mentioned reasons.

Numerical taxonomies have been criticised for lacking parsimony and clear distinctions between categories (Bunn 1993). However they have been productively used in the study of consumers, and have generated meaningful typologies. Consumer studies which have utilised the taxonomic approach include Claxton, Fry and Portis (1974), Westbrook and Black (1985) and Bergadaa, Faure et al. (1995). The clusters emerging from a numerical taxonomy can be developed into types which are constructs with an explanatory value (Lorr 1983). A typology which is developed from a numerical taxonomy can then increase our ability to predict an attribute of interest and to understand how different action dimensions are related.

For this thesis, the key dimensions for classifying online shopping actions were first identified through the qualitative study of online shopping actions discussed in Part II. These action dimensions were then operationalised through a survey questionnaire which queried respondents on how their online shopping actions typically vary according to these attributes. A numerical taxonomy of the questionnaire responses was conducted to identify distinct clusters of online shopping actions. The cluster analysis results were then developed into online shopper types, to be discussed in the next chapter. A secondary goal was also to identify socio-economic variables and Internet usage patterns which are associated with these online shopper types.

6.3 KEY ACTION DIMENSIONS OF ONLINE SHOPPING

Hacker (1985) suggests that several features of actions can be used to classify them in a taxonomy: (i) class of charge or task: main classes of tasks such as producing, conveying and dialogue activities which can be further divided into subclasses; (ii) subject of action: classes of subjects include people, merchandise, information; (iii) form of cooperation: examples of such actions are actions without cooperation or actions in autonomous groups; (iv) complexity: this refers to the number of component activities and the varieties of demand required by these components; (v) completeness or incompleteness of actions: actions can be distinguished by the presence or absence of different operations, e.g. analysing goals, monitoring implementation, considering and deciding on different courses of action; (vi) levels of mental regulation: goal directed activities can be guided by conscious or unconscious mental processes such as values and attitudes.

Based on the findings from the interviews and observations, the features which can be used to classify online shopping acts include the levels of mental regulation, the complexity of action and form of cooperation. The complexity of action encompasses two components – the structure of the action and the cognitive processes involved in the action. The levels of mental regulation comprise dispositions – mental representations of how an action should be carried out, the actor's value structures, action/state orientation and the actor's propensity to experience flow in carrying out the action. The form of cooperation comprises any interactive actions conducted in the execution of an action.

However, let me first explain the bases for ruling out the other possible features suggested by Hacker. Classifying online shopping actions according to "class of task" would not be useful because online shopping is predominantly a form of pre-purchase information gathering which does not involve other task classes such as dialogue activities. Grouping online shopping actions by the "completeness or incompleteness of the action" is of little value because the qualitative findings show that in almost all online shopping actions, processes for analysing goals, monitoring implementation, considering and deciding different courses of action are present.

Classifying online shopping actions according to the "subject of action" can be interpreted as classifying them according to the nature of the product and service which is being shopped for. This is an important issue in online shopping which should be deliberated at length. Lal and Sarvary (1998) suggested that products sold over the Internet can be divided into two groups: (i) products which consumers need not see in person before purchasing e.g. books and compact discs, and (ii) experience products which consumers prefer to see and feel before purchasing e.g. clothing and food. They therefore postulate that the nature of the product – whether it is an experience or a non-experience good – determines its saleability over the Internet, i.e. the extent to which consumers would be willing to buy the good online. In the same vein, Liang and Huang argued that the consumer acceptance of products in electronic markets is dependent upon the "transaction cost" which is a function of the "uncertainty and asset specificity" (Liang and Huang 1998). Studies of conventional shopping have established in the past that product characteristics do influence consumers' pre-purchase information gathering patterns (Claxton, Fry et al. 1974).

While product characteristics do influence the nature of online shoppers' actions, it was not found to be a useful variable for classifying online shopping actions. This is principally due to the fusion between online stores and brick-and-mortar stores. Many brick-and-mortar stores have recognised the importance of having an online presence and have therefore set up websites such as JCPenny.com and Macys.com. Some online stores which previously did not have brick-and-mortar representation have now associated themselves with brick-and-mortar stores to expand their customer base, e.g. Amazon.com

teaming up with Borders bookstore. As a result, consumers are prepared to buy experience goods online so long as they are able to sample or inspect the product in its brick-and-mortar store. Others conduct their research online, before proceeding to buy the products in the brick-and-mortar stores. The distinction between online shopping and conventional shopping is thus blurred because both elements can be involved in a single transaction.

Most importantly, the distinction between experience and non-experience goods is not a good one because products which can be considered experience and non-experience goods differ from person to person. For example, books are mostly treated as non-experience goods. However, some consumers like to see the font used in typesetting the book, to be able to thumb through the book and feel the weight of the book in their hands etc. In this case, the book would not be a non-experience good but certainly an experience good. Clothing is also largely regarded as an experience good. However, if an online shopper is familiar with the size and quality of clothing in a particular store, that clothing can be ordered online without first trying them on, thereby making them non-experience goods. At the same time, some experience goods are only experience goods for the first transaction. In repeat purchases of these same goods, they can no longer be considered experience goods. Given this inconsistency in how online shoppers decide which products can be bought online and which should be bought in a regular store, it is not productive to classify their actions according the nature of the products which they had purchased online.

6.4 Action Dimensions Explored In the Survey

Let me now discuss the features which can be used for classifying online shopping actions and how these features will be operationalised in the survey questionnaire.

6.4.1 Structural dimensions

Online shopping actions were found to adopt a predominantly hierarchical-sequential structure. At the same time, online shopping action structures were also more

complex and multi-dimensional when online shoppers multi-task online, multi-task offline or both:

6.4.1.1 Hierarchical-sequential nature of action

Most of the interviewees had a hierarchical-sequential online shopping action structure. They would first decide on a broad category of products, before narrowing down the number of products they had to peruse by using their key criteria, e.g. price, quality, brand etc. As was postulated in Chapter 4, the hierarchical-sequential nature of online shopping seems to be caused by the nature of the Internet as a "pull" medium and the prevalence of search engine usage in online shopping. The online user has to make sense of the mass of websites available on the Internet and does so by using his hierarchy of criteria to progressively narrow down the number of online stores, product categories and products which he has to consider. This process of narrowing down the consideration set is hierarchical and sequential. Hierarchical-sequential course of action was included in the survey to ascertain whether most online shopping actions are indeed hierarchical-sequential. It was operationalised as a binary variable.

6.4.1.2 Multi-tasking online and offline

Multi-tasking online, offline or a combination of both was found to be a common characteristic of online shopping actions. Online shoppers who engage in multi-tasking of any kind will invariably have more complex action structures. They toggle between different Internet Explorer windows or leave the computer to tend to other activities such as cooking or reading a magazine. Multi-tasking therefore has implications for the level of attention which an actor can devote to each of his actions, including his online shopping actions.

In the survey, multi-tasking offline and multi-tasking online were both operationalised as binary variables. It is important to note that multi-tasking only includes activities which the online shopper has to make a concerted effort to perform. For example, listening to the radio while shopping online is not considered as multi-tasking but reading a magazine or checking email is. As a consequence, the survey questions on multi-tasking only cited examples of activities that could be considered as multi-tasking.

6.4.2 Goal enactment processes

Many goal enactment processes are performed in the execution of online shopping actions. These include process of goal generation, specifically whether they tend to have fixed or varying goals. The attention processes of online shoppers is another determining factor. Interactive actions are occasionally performed in goal enactment as well.

6.4.2.1 Fixed/varying goal

Most of the interviewees studied fell into two broad categories. Those with fixed goals and those who were more suggestible and whose goals were liable to vary with external influences. Therefore, online shoppers with fixed goals tend to shop online with something specific in mind, and seek only to buy that specific product. Others are likely to start an online shopping trip with something vague in mind and have a propensity to view any product which catches their attention, therefore allowing their goals to vary. The dimension fixed/varying goal was operationalised through two Likert scale statements. The higher the individual's score, the more likely he is to shop with fixed goals in mind. The lower the individual's score, the more likely he is to shop with varying goals.

6.4.2.2 Attention processes

This dimension is related to the dimension of fixed and varying goals. Most of the time, the interviewees with fixed goals would pay a lot of attention to what they were shopping for because they were geared towards fulfilling that particular goal. Hence they concentrated hard on which websites they surfed and what they would shop for. As for those with varying goals, they tended to be quite casual in their approach towards online shopping, basically clicking on whatever was interesting and caught their eye. They did not really pay much attention to what they were shopping for and engaged in the practice of scanning. The interviewees therefore varied in the levels of attention which they devoted to online shopping.

The dimension of attention processes was operationalised through two Likert scale statements, one stating "When I shop online, I think hard about which online stores

to surf and study the products closely." And the other "When I shop online, I simply surf any online store which comes to mind and scan through the products quickly." Scores for these two statements were originally intended to be summated. However, Cronbach Alpha for the two statements was low (0.05) and therefore, the two statements were treated as individual scales in the cluster analysis, the former statement as a scale for "Propensity towards concentrating" and the latter statement as a scale for "Propensity towards casual scanning".

6.4.2.3 Interactive actions

As discussed in Chapter 4, online shoppers do not engage in the what are traditionally understood as interactive actions, i.e. real-time dialogues with another party. A small minority of the interviewees did on occasion engage in asynchronous interactive actions such as emailing their family, friends or store representatives to consult them on their online shopping. Typically however, it appeared that online shopping remained an independent and private activity for most of the interviewees studied. The likelihood of online shoppers engaging in interactive actions in their typical online shopping was therefore queried in the survey and was operationalised as a binary variable.

6.4.3 Dispositions

Goal directed activities are guided by conscious or unconscious mental processes such as knowledge, attitudes, self-regulation and flow.

6.4.3.1 Relevant knowledge

The complexity of actions is defined by the number and types of its constituent actions (Hacker 1985). Online shopping actions are constituted by a large number of component action steps including the use of web browsers, search engines, the navigation of websites etc. These actions exert varying demands on the actor in terms of the types of relevant knowledge the actor needs to utilise to perform them. As could be seen from the discussion in Chapter 4, online shoppers need to possess general knowledge e-commerce retail sites and alternative shopping options, as well as specific knowledge about search engines and website design in order to plan and expedite their online shopping actions. The more knowledge an online shopper utilises in his online shopping, the more complex

his online shopping actions are. Online shopping actions can be classified by the levels of knowledge utilised in their execution. For example, online shopping actions involving the use of search engines or comparison shoppers involve only a low level of knowledge as these are fairly common features. Actions involving the use of product review websites or participation in a chat room or web forum to discuss online shopping require a moderate knowledge level. Actions involving the use of online shopping software require a high level of knowledge.

The dimension of relevant knowledge was therefore operationalised as an ordinal variable where respondents were ranked as having low, moderate or high levels of relevant knowledge based on the highest ranking technology which they used in their typical online shopping actions. Since the online shopping market is constantly innovating, respondents were given the flexibility of writing down other types of Internet technologies which they had utilised in their online shopping. These answers were then assessed and classified accordingly as low, moderate or high levels of knowledge.

6.4.3.2 Price consciousness and store consciousness

Two attitudes found to be significant in influencing the course of online shopping actions were price consciousness and store consciousness. As discussed in Chapter 4, these two attitudes appeared to lie on a continuum. Online shoppers who were more price conscious tended to be less store conscious and vice versa. Price conscious interviewees concentrated on obtaining better value while store conscious interviewees were more concerned about the reputation of the online store. Therefore, price/store consciousness was assessed as one variable and operationalised through six Likert scale statements. The higher the score of the individual, the more price conscious he was. Correspondingly, the lower the score of the individual, the more store conscious he was.

6.4.3.3 Flow

The interview findings showed that the experience of flow affected the nature of online shopping actions. Online shoppers who experienced flow were more likely to lose track of time when they shopped online and as a result were more likely to make purchases. They were also more likely to find online shopping entertaining and to use it

as a diversion. The flow dimension was operationalised through six Likert scale statements. The higher the score of the individual, the more likely he was to experience flow. Correspondingly, the lower the score of the individual, the less likely he was to experience flow.

6.4.3.4 State-orientation and action-orientation

State- and action-orientation is a short-term self-regulatory process which is only in place during the enactment of an action and affects the motivation state of the actor to perform the action. State-oriented interviewees seemed more likely to have varying goals compared to action-oriented shoppers who tended to have fixed goals. This is because the more state-oriented an online shopper is, the more susceptible he is to environmental influences such as product recommendations and banner advertisements. State- and action-orientation also lie on a continuum where the more state-oriented a person is, the less action-oriented he is and vice versa. State- and action-orientation was therefore operationalised as one variable, through six Likert scale statements. The higher the score of the individual, the more action-oriented he was. Correspondingly, the lower the score of the individual, the more state-oriented he was.

6.5 Questionnaire Design

The survey focused on different dimensions of online shopping actions, as discussed in section 6.4, as well the respondents' socio-economic profiles and experience with the Internet and online shopping. Respondents were asked to think of their typical online shopping actions when they responded to the survey. Where relevant, questions were preceded by the phrase "when I shop online" to remind respondents to confine their answers to their online shopping experiences only and not to consider their shopping experience in general. A self-administered questionnaire with closed questions was designed. A copy of the questionnaire is at Appendix 1.

A concerted effort was made to ensure that the questionnaire was not too long. In an increasingly time-pressed environment where information overload is a common phenomenon and people therefore have less time to dwell on a lengthy questionnaire, the reliability of this survey will be enhanced with a manageable questionnaire which is not

overly long. Another important rationale for moderating the length of the questionnaire is to avoid a common pitfall of numerical taxonomies, where the inclusion of too many variables makes clustering unmanageable (Bailey 1994). The questionnaire was piloted on two individuals by asking them to think aloud as they answered it (Foddy 1993). This was to ensure that the questionnaire would be properly understood by the respondents. Based on these two tests, it was discovered that certain technical terms had to be replaced with terms more suited to the layperson and certain questions had to be rephrased for enhanced clarity. The design of each section is discussed as follows:

6.5.1 Section I: Binary variables

Section I of the questionnaire dealt primarily with the structure of online shopping actions. As this section dealt with nominal variables, it comprised questions where respondents had to select one of two statements which best described their typical online shopping action. In this section, the dimensions of hierarchical-sequential action, multi-tasking online, multi-tasking offline and interactive actions were addressed. The two statements for each variable were developed from the interview findings in the qualitative study of online shopping actions.

6.5.2 Section II: 7-point Likert scales

Section II comprised twenty-two Likert scale items relating to five dimensions of online shopping action structures – (i) fixed/varying goal, (ii) action orientation, (iii) price/store consciousness (iv) attention processes and (v) flow. Respondents had to indicate their level of agreement or disagreement with each item on a 7-point scale.

The Likert scale was adopted for this section because of its ability to provide a wider variance of views than binary questions. It is also a questionnaire format which many people are familiar with and this enhances the survey's replicability. The strength of the Likert scale is that it enables one to quantify opinions and beliefs, thereby obtaining more precise methodologies and provides considerable detail and variance (Berger 2000, p. 196).

In designing a Likert-type attitude scale there are several important issues which must be addressed. It is imperative to strike a balance between positive and negative attitude statements to overcome the danger of the score obtained from the attitude scale reflecting the users' biased tendency to agree rather than disagree with the attitude statements - an effect known as response or "acquiescence" set (Spector 1992, p. 24). This is due to the fact that the agree-disagree scale consistently goes from left to right and there is a tendency for people to fill in only one 'position' on the page. Research has shown that the optimum number of categories for a Likert Scale is seven for the following reasons: (i) most statistical procedures used for analysing data will only work on data with six or more categories (Green and Rao 1970); (ii) in the event that categories need to be collapsed for analysis, it is convenient to have more rather than fewer categories (Foddy 1993).

For the survey questionnaire, the seven categories ranged from 'Strongly Agree' to 'Strongly Disagree' with a 'Neutral' category in the middle. The response to each statement was converted to a score on a scale ranging from 1 (most negative evaluation) to 7 (most positive evaluation). Thus, for example, if the respondent strongly agreed with a positive statement, he would score 7 for that particular item, but would only score 1 for strongly agreeing with a negative statement (Spector 1992). For each variable, equal numbers of positive and negative statements were constructed and the respondents scores for the statements pertaining to each variable were summed. The dimension fixed/varying goal had two Likert scale statements. The higher the individual's score, the more likely he was to shop with fixed goals. The lower the individual's score, the more likely he was to shop with varying goals. Price/store consciousness was measured by six Likert scale statements. The higher the score of the individual, the more price conscious he was. Correspondingly, the lower the score of the individual, the more store conscious he was. The flow dimension was operationalised through six Likert scale statements. The higher the score of the individual, the more likely he was to experience flow and vice versa. State- and action-orientation was operationalised through six Likert scale statements. The higher the score of the individual, the more action-oriented he was. Correspondingly, the lower the score of the individual, the more state-oriented he was.

Some of the Likert scale statements were constructed based on the interview findings. Other items were adapted from GVU's *Purchasing on the Internet Questionnaire* (1998). Items pertaining to state- and action-orientation were adapted from Babin's (1995) action-control orientation survey for studying consumer self-regulation in a retail environment. To reduce the generality of the respondents' answers and to prevent the provision of stereotypical responses, respondents were instructed to reflect on their personal experiences of online shopping.

6.5.3 Section III: Socio-economic and Internet usage variables

Section III of the questionnaire queried respondents on their demographic and socio-economic profiles, including their gender, age, occupation, household income, educational achievement, marital status and type of residential area. These questions were included in order to investigate the possible link between these variables and the individual's online shopping actions. For sensitive questions relating to income, marital and educational status, the "Rather not say" option was included out of respect for the respondents' privacy.

Section III also queried respondents on their Internet usage habits, specifically the number of years they had been using the Internet. This was to ascertain their levels of experience with the Internet. Respondents were also asked several questions relating to their experience of online shopping. They were asked how long they had been shopping online and the amount of money they spent on average on online shopping each month. They were also queried on which categories of products and services they had bought online. As it was impossible to provide an exhaustive list of product categories, respondents were given the flexibility to write in details of products and services which did not come under the pre-stated categories. It was then left up to the researcher's discretion as to whether these products came under the pre-stated categories or under separate categories altogether. Eventually, the respondents answers' were re-classified into those who had bought (i) 1 to 2, (ii) 3 to 4 and (iii) 5 or more categories of products and services online.

Section III also included a question for the variable "relevant knowledge", which queried respondents on the Internet technologies which they had utilised in their online shopping. Respondents were ranked according to the highest level of knowledge checked. Respondents who checked only (a) and/or (b) were ranked "low"; respondents who checked up to (c) and/or (d) were ranked "moderate" and respondents who checked up to (e) and/or (f) were ranked "high". Respondents were also given the flexibility to provide information on technologies not listed in this question. The technologies which respondents listed were then individually assessed as to whether they should be considered to be of low, moderate or high levels of relevant knowledge. A summary of the questions on online shopping actions and the theoretical action dimensions which they correspond to is provided in Table 6.1.

Table 6.1 Correspondence of Questionnaire Items to Action Dimensions

Action Dimensions			*Questionnaire Items*
(S) Structural	Sequence of steps	**(S1)** Hierarchical-sequential logic	(a) When I shop online, I use my main considerations e.g. price, brand, colour etc. to narrow down which products to look at. (b) When I shop online, I look at products in a random manner, with no particular considerations in mind.
	Parallel action - multi-tasking	**(S2a)** Multi-tasking online	(a) When I shop online, I do other things on my computer at the same time e.g. check e-mail, join an online chat, work on a word-processing document etc. (b) When I shop online, I focus solely on shopping online.
		(S2b) Multi-tasking offline	(a) When I shop online, I do other things at the same time e.g. cook, watch television, read a magazine etc. (b) When I shop online, I focus solely on shopping online.
(P) Cognitive processes	Goal generation	**(P1)** Fixed/varying goal	(a) I know exactly what I want before I begin to shop online. (b) I shop online with no idea of what I want exactly, and let what I see guide me.
	Goal enactment	**(P2)** Attention processes	*Propensity towards concentrating* When I shop online, I think hard about which online stores to surf and study the products closely. *Propensity towards scanning* When I shop online, I simply surf any online store which comes to mind and scan through the products quickly
		(P3) Interactive actions	(a) When I shop online, I usually decide on my purchases on my own, without consulting anyone. (b) When I shop online, I usually decide on my purchases after consulting either family, friends or store representatives.
	Goal protection	**(P4)** Action orientation	See D3

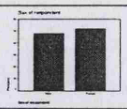
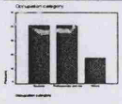
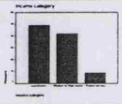
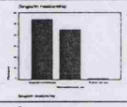
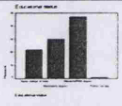
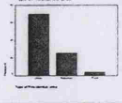
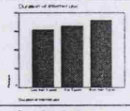
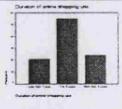
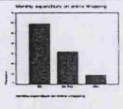
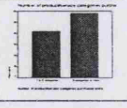
Action Dimensions			*Questionnaire Items*
(D) Dispositions	Mental representations	**(D1)** Relevant knowledge	In your experience of shopping online, which of the following Internet technologies have you used? (Please check all that apply.) (a) Search engines, e.g. yahoo.com, google.com, altavista.com (b) Comparison shopping websites, e.g. mysimon.com, dealtime.com, storerunner.com (c) Product review websites, e.g. productreviewnet.com, consumersearch.com (d) Participated in a chat, newsgroup or web forum to discuss online shopping matters (e) Downloaded online shopping software, e.g. SmartStart at roboshopper.com (f) Viewed the Java/Java script of an online store/ retail website (g) Others, please specify: _____
	Motivation states	**(D2)** Flow	Indicate your level of agreement with the following statements: (a) Online shopping helps me forget about the day's problems. (b) Online shopping helps me manage my time efficiently. (c) I shop online for the pure enjoyment of it. (d) I shop online only when I need something. (e) Online shopping is very entertaining. (f) Online shopping is very convenient.
		(D3) Action/State orientation	Indicate your level of agreement with the following statements: (a) When I shop online, I like to complete my shopping task as quickly as I can. (b) When I shop online, I like to take my time. (c) When I shop online, I click only on products which I had already planned to buy. (d) When I shop online, I click on any product which looks interesting. (e) When I shop online, I ignore all online advertisements. (f) When I shop online, I click on online advertisements which attract me.
	Attitudes	**(D4)** Price/Store consciousness	Indicate your level of agreement with the following statements: (a) I only shop at online stores which give me value for money. (b) I only shop at online stores which have given me good service in the past. (c)I'm willing to shop at online stores which I've not heard of, as long as they offer low prices. (d) I only shop at websites of well-known and established stores. (e) When I shop online, price is my only consideration. (f) When I shop online, the security of an online store is my only consideration.

6.6 SAMPLE AND SAMPLE BIASES

The sample of survey respondents was drawn from New Haven county in Connecticut, USA. As of 1999, New Haven county had a population of about 790, 000 residents in about 300,000 households (Connecticut Department of Economic and Community Development 1999). The respondents were approached along one of the main thoroughfares in the city of New Haven which had shops, restaurants, cafes and corporate offices. They were first asked whether they had made any online purchases before. Only those who responded "Yes" were asked to fill in the questionnaire. Incomplete questionnaires were rejected and the survey was conducted until 100 complete questionnaires were collected. In total, 112 questionnaires were administered, of which 12 questionnaires were rejected for being incomplete.

Table 6.2 summarises the scores of the respondents for the socio-economic and Internet and online shopping usage variables, and their distribution across the sample.

Table 6.2 Sample distribution for socio-economic, Internet usage and online shopping variables

Variables	Categories	Percentage	Distribution
Sex	Male	48	
	Female	52	
Age Category	Under 30	49	
	31-40 yrs	30	
	> 40 yrs	21	
Occupation Category	Students	41	
	Professionals and managers	41	
	Others	18	
Income Category *	Low Income (Below $40K)	49	
	Medium to high income (Above $40 K)	42	
Marital status (Single/In relationship) *	Single/divorced/separated	54	
	Married/domestic partnership	45	
Highest level of Educational achievement*	Some college or less	22	
	Bachelor's degree	30	
	Master's/PhD degree	47	
Residential Area	Urban	70	
	Suburban	26	
	Rural	4	
Duration of Internet use	Less than 3 years	31	
	3 to 5 years	33	
	> 5 years	36	
Duration of online shopping use	Less than 1 year	21	
	1 to 3 years	55	
	> 3 years	24	
Monthly expenditure on online shopping*	Less than $50	59	
	$50 - $100	32	
	> $300	9	
No. of product or service categories purchased	1 to 2 categories	42	
	3 categories or more	58	

* Percentages do not add up to 100 because "Rather not say" responses have been omitted.

6.6.1 Socio-economic distribution

It is difficult to compare the socio-economic profile of the sample against that of the US online shopping population as a whole due to the absence of conclusive figures. Reports on online shopping in the US vary widely in their methodologies and tend to

study online shoppers as a subset of the US online population as a whole, e.g. the Pew Internet and American Life Project (2000). The definition of what constitutes an online purchase also varies from study to study with some including online travel reservations as online purchases (ACNielsen 2000) and others omitting them (Ernst and Young 2000; Pew Internet and American Life Project 2000). However, the goal of this thesis was not to generalise the findings across the US online shopping population but to explore whether typologising online shoppers according to their online actions would generate meaningful clusters or groups. Hence, achieving sample representative-ness was not a prime consideration.

Nonetheless, let us compare the socio-economic distribution of the sample against that of the US online shopping population (where such figures are available) so that we can be cognisant of the sample biases. With regard to sex, the sample for this study comprised 48 per cent men and 52 per cent women. This is roughly in keeping with the US online shopping population as a whole, where women constitute more than half of the country's online shoppers with 58 per cent of them being female as opposed to 42 per cent being male (eMarketer.com 2001). The sample was fairly evenly split between those who were single, divorced or separated making up 54 per cent and those who were married or in domestic partnerships constituting another 45 per cent. The respondents were mostly residents of urban rather than rural or suburban areas with residents of urban areas constituting 70 per cent of the sample.

Students comprised 41 per cent of the sample and professionals and managers constituted another 41 per cent. The remaining 18 per cent of the sample was made up of unskilled labourers, homemakers and retirees. Compared to the US online shopping population as a whole, the sample was skewed towards younger online shoppers. The US online shopping population is dominated by older online shoppers with those between the ages of 30 to 49 years old making up 52 per cent and those between 18 to 29 yrs old making up 29 per cent (Pew Internet and American Life Project 2000). The sample on the other hand comprised 30 per cent of respondents between 31 and 40 yrs, 21 per cent above 40 years of age and 49 per cent under 30 years of age. With regard to income, 30 per cent of online shoppers in the US have annual family incomes above $75,000 and

only 15 per cent have family incomes of less than $30,000 (Pew Internet and American Life Project 2000). In contrast, only 13 per cent of the sample had incomes above $75,000 and 49 per cent had incomes below $40,000. The sample was therefore biased towards people from the low income group. The sample was also biased towards highly-educated people with 30 per cent being college graduates and 47 per cent having postgraduate degrees. In contrast, only 44 per cent of online shoppers in the US have college degrees (Pew Internet and American Life Project 2000).

In summary, the sample is skewed towards young and highly educated people from the lower income group. The gender distribution of the sample was however fairly reflective of the US online shopping population as a whole.

6.6.2 Internet and online shopping usage

With regard to number of years the respondents had been using the Internet, the sample was fairly evenly split amongst people who had used it for less than three years (31 per cent), three to five years (33 per cent) and more than five years (36 per cent). The sample distribution was less even for experience with online shopping. Most of the respondents had shopped online for between one and three years (55 per cent), whereas 21 per cent had done so for less than one year and 24 per cent for more than three years. A clear majority of 59 per cent of the respondents spent less than $50 on their online purchases each month while 32 per cent spent between $50 to $100 and a small minority of 9 per cent spent more than $300. 58 per cent of the respondents had purchased products and services from 3 to 4 categories online, followed by 42 per cent who had purchased products and services from 1 to 2 categories.

6.7 CONCLUSION

This chapter began with a brief review of existing typologies of online shoppers and explained why these typologies do not accurately reflect online shopping behaviour. It then went on to explain why this thesis adopted the numerical taxonomic approach for the quantitative analysis of online shopping actions. The dimensions which were used for classifying online shopping actions in a survey were explicated. These theoretically-grounded and empirically-derived dimensions were namely, hierarchical-sequential

nature of action, multi-tasking online and offline, interactive actions, fixed/varying goal, attention processes, relevant knowledge, price/store consciousness, flow and state/action orientation. The operationalisation of these dimensions in the survey questionnaire was also explained. The design of the questionnaire was also described and the sampling and survey administration process was explained. A discussion of the socio-economic profile of the sample was conducted and sample biases were highlighted. The Internet and online shopping usage patterns of the sample were also identified. In the next chapter, the survey results will be analysed using the numerical taxonomic approach and a typology of online shoppers will be presented.

7 ACTION-BASED TYPOLOGY OF ONLINE SHOPPERS

In the last chapter, the design and administration of the survey on online shopping actions was explained. In this chapter, the results of the pilot trial of the survey will be analysed. The cluster analysis of the survey results will be discussed and the taxonomy of consumer online actions will be presented. The socio-economic profiles of each cluster of shoppers will also be analysed. The chapter then concludes with the development of an action-based typology of online shoppers.

7.1 CLUSTER ANALYSIS

Since the goal of this thesis was to explore whether meaningful clusters could emerge from a focus on the structural, cognitive and dispositional dimensions of online shopping actions, only the action-related variables were included in the cluster analysis. A correlation matrix of the action-related variables is at Appendix 4. A summary of these action-related variables and the distribution of the respondents' scores for these variables is provided in Table 7.2.

There are several recommended methods for performing a hierarchical cluster analysis on variables of mixed types. One solution is to reduce all of the variables into binary variables (Kauffman and Rousseeuw 1990). This would however result in a loss of information. The more useful method is to treat all variables as interval variables. This method is appropriate for symmetric binary variables and the ranks originating from ordinal variables. Therefore, the latter method of treating all variables as interval data was adopted. The clusters were generated using the Ward Method, with the Squared Euclidean distance as the similarity measure, both of which can be applied to interval data. All analyses were conducted using the statistical software package for the social sciences SPSSx.

The issue of determining how many clusters to separate data into is an unresolved issue in cluster analysis (Aldenderfer and Blashfield 1984). This thesis utilised the informal method of studying the differences in the fusion levels of the dendrogram, where large changes indicate a particular number of clusters (Aldenderfer and Blashfield

1984; Everitt 1993). Four clusters were clearly visible from the dendrogram. The dendrogram is at Appendix 5.

The validity of the four cluster solution produced by the Ward Method was assessed by conducting a cluster analysis using the same distance measure but a different clustering method. Similar clusters were produced using the Furthest Neighbour, Complete Linkage method. A cross-tabulation of the clusters generated by the two methods revealed that only 20 per cent of the cluster members lay outside of the diagonal as reported in Table 7.2. The four cluster solution was validated and we can assume it is robust.

Table 7.1 Cross-tabulation of Ward and Furthest Neighbour Method clusters

	Furthest Neighbour Clusters				
Ward Clusters	**1**	**2**	**3**	**4**	**Total**
1	17			12	**29**
2	2	17			**19**
3			24		**24**
4			6	22	**28**
Total	**19**	**17**	**30**	**34**	**100**

Chi Sq=192.762, p=0.00, Phi= 1.388, Cramer's V= 0.802

Cluster 1 was the largest cluster with 29 cases, followed by Cluster 2 with 19 cases, Cluster 3 with 24 cases and Cluster 4 with 28 cases. The means and standard deviations of each cluster for each action-related variable are reported in Table 7.3. For better interpretability, the means for the binary and ordinal variables were computed rather than the modal scores.

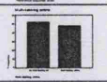
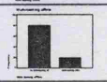
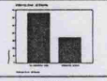
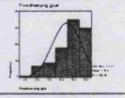
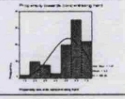
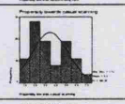
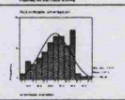
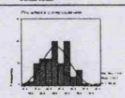
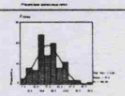
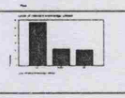
	Variables	Variable Type	Number of items	Range of possible scores	Cronbach α	Mode/ Mean	Standard Deviation	Distribution
1	**(S1)** Hierarchical-sequential logic	Binary	-	0/1	-	1	-	
2	**(S2a)** Multi-tasking online	Binary	-	0/1	-	0	-	
3	**(S2b)** Multi-tasking offline	Binary	-	0/1	-	0	-	
4	**(P3)** Interactive actions	Binary	-	0/1	-	0	-	
5	**(P1)** Fixed goal	Ordinal (Assumed Interval-scaled)	2	1-7	0.69	10.91	2.41	
6	**(P2a)** Attention processes – propensity towards concentrating	Ordinal (Assumed Interval-scaled)	1	1-7	-	5.22	1.67	
7	**(P2b)** Attention processes – propensity towards casual scanning	Ordinal (Assumed Interval-scaled)	1	1-7	-	3.45	1.74	
8	**(P4)** Action orientation	Ordinal (Assumed Interval-scaled)	6	1-7	0.70	27.2	6.67	
9	**(D2)** Price-consciousness	Ordinal (Assumed Interval-scaled)	6	1-7	0.53	25.5	5.61	
10	**(D3)** Flow	Ordinal (Assumed Interval-scaled)	6	1-7	0.56	17.9	5.26	
11	**(D1)** Relevant knowledge	Ordinal (Assumed Interval-scaled)	-	1,2,3	-	1	-	

Table 7.2 Action-related variables included in the cluster analysis

		Cluster			
		1.00	2.00	3.00	4.00
Multi-tasking offline	Mean	.10	.32	.33	.11
	Std Deviation	.31	.48	.48	.31
Multi-tasking online	Mean	.45	.74	.46	.36
	Std Deviation	.51	.45	.51	.49
Hierarchical-sequential action	Mean	.93	.95	.79	1.00
	Std Deviation	.26	.23	.41	.00
Interactive actions	Mean	.38	.37	.29	.32
	Std Deviation	.49	.50	.46	.48
Knowledge level	Mean	1.59	1.95	1.67	1.46
	Std Deviation	.78	.91	.82	.74
Action orientation	Mean	30.72	18.53	23.50	32.61
	Std Deviation	4.68	3.88	4.04	2.75
Price consciousness	Mean	30.31	29.16	21.21	21.61
	Std Deviation	3.87	3.72	4.12	3.17
Flow	Mean	14.62	24.32	19.92	15.14
	Std Deviation	3.67	3.59	4.10	3.57
Fixed goal	Mean	11.97	9.26	10.17	11.57
	Std Deviation	1.72	2.73	2.75	1.69
Propensity towards concentrating	Mean	5.48	5.42	5.38	4.68
	Std Deviation	1.64	1.64	1.38	1.89
Propensity towards casual scanning	Mean	2.83	4.16	3.92	3.21
	Std Deviation	1.73	1.54	1.53	1.83
		n=29	n=19	n=24	n=28

Table 7.3Means and standard deviations of action-related variables for each cluster

A summary of how the four clusters rank according to the different action-related variables is reported in Table 7.4:

Action-Related Variables	**Cluster**			
	1	**2**	**3**	**4**
Multi-tasking offline	Low	High	High	Low
Multi-tasking online	Moderate	High	Moderate	Low
Hierarchical-sequential action	Moderate	Moderate	Low	High
Interactive action	High	High	Low	Moderate
Level of relevant knowledge	Moderate	High	Moderate	Low
Action orientation	High	Low	Moderate	High
Price consciousness	High	High	Low	Low
Flow	Low	High	Moderate	Low
Fixed goal	High	Low	Moderate	High
Propensity towards concentrating	High	High	Moderate	Low
Propensity towards casual scanning	Low	High	High	Moderate

Table 7.4 Relative cluster rankings of mean scores for each action-related variable

7.2 Analysis of Action Structures

The results of the cluster analysis and cross-tabulation portray a four group taxonomy of consumer online actions. The structural, cognitive and dispositional characteristics of each group will be discussed.

7.2.1 Group 1

Structurally, the online shopping actions of this group were moderately hierarchical-sequential, and involved a low level of multi-tasking offline and a moderate level of multi-tasking online. Cognitively, several goal enactment processes were salient. In terms of attention processes, the actions of this group involved a high propensity towards concentrating on online shopping and low propensity towards casual scanning. The actions of this group tended to be guided by fixed goals. There was also a high likelihood of interactive actions being executed while shopping online. Disposition-wise, the actions of this group were influenced by the high action-orientation of the shoppers and their price consciousness. Given the high action-orientation, propensity to experience flow was low. In addition, the actions of this group were guided only by a moderate level of relevant knowledge.

With regard to how the different action dimensions inter-relate, it is likely that price consciousness results in concentration and careful deliberation rather than casual scanning. The low propensity towards experiencing flow is likely to be linked to the moderate knowledge level. In the absence of flow experience, the amount of time spent online is reduced and consequently, opportunities for knowledge acquisition are also minimised. It can be argued that interactive actions occur as a result of the actors' need for assistance and guidance given their moderate knowledge level. This action structure corresponds with the action-oriented, fixed goal structure proposed in Chapter 3.

7.2.2 Group 2

The actions of this group were most strongly influenced by dispositions. They were driven by a high level of relevant knowledge, the highest of the four groups. This is likely to be linked to the group's propensity to experience flow, also greatest amongst the four groups. Their flow experience leads to prolonged exposure to the Internet, thereby increasing the opportunities for knowledge acquisition. Consumers

who experience flow while shopping online pay frequent, repeat visits to online stores, spend a longer time at the stores and demonstrate increased learning (Hoffman and Novak 1996). With enhanced knowledge, price consciousness results because of a heightened awareness of retail options. The propensity to experience flow is also due to the actors' state-orientation, which increases susceptibility to environmental influences and the likelihood of having varying rather than fixed goals.

With regard to attention processes, the actions of this group involved both a high level of concentration and a high level of casual scanning. While this seems in the first instance to be contradictory, that scanning and concentrating can occur concurrently, it is likely that prolonged usage of the Internet requires scanning for relevant product information initially, before concentrating hard on perusing the relevant information. As discussed in chapter 4, scanning and picking behaviour occurs so that the cognitive capacities of the actor can have a reprieve from intense mental processing. There was also a high tendency to engage in interactive actions. Structurally, the actions of this group were of a hierarchical-sequential nature, although less so than those of other groups due to the high propensity to multi-task both online and offline. This action structure corresponds with the state-oriented, varying goal and the knowledge-driven structures proposed in Chapter 3.

7.2.3 Group 3

Structurally, the actions of this group involved a high level of offline multi-tasking and a moderate level of online multi-tasking. Given this propensity to multi-task, the actions of this group were the least hierarchical-sequential of the four groups. This action structure was influenced by the dispositions of the actors, who were state-oriented and as a consequence, prone to experiencing flow and to have varying rather than fixed goals. Flow usually results in more prolonged Internet surfing and this increased exposure probably contributed to the moderate knowledge level of the actors, higher than that of groups 1 and 4 but lower than that of group 2. Given this state-orientation and tendency towards varying goals, the actions of this group tended to involve casual scanning rather than concentration. The low price consciousness of the actor could also have contributed to casual scanning since the careful deliberation of purchase options was not an imperative. Interactive actions were also least likely to be involved in the actions of this group. This action structure corresponds with the

state-oriented, varying goal as well as the multi-tasking structures described in Chapter 3.

7.2.4 Group 4

The actions of this group were driven by a high level of action-orientation, highest amongst the four groups. This disposition resulted in a strongly hierarchical-sequential action structure which involved only a low level of online and offline multi-tasking. This focused, goal directed approach was also manifested in a high tendency towards fixed goals. By the same token, there was only a low propensity to experience flow, implying an absence of exploratory online actions. Consequently, there was a low propensity towards concentrating and only a moderate propensity towards casual scanning. This absence of exploratory online actions also explains the knowledge level of this group which was lowest of the four groups. Given this low knowledge level, awareness of the online retail market was lower and store consciousness rather than price consciousness prevailed. This implies that the actor would merely surf familiar online stores rather than shop around, taking a goal-directed rather than exploratory approach. The actions of this group involved a moderate level of interactive actions. This action structure corresponds with the action-oriented, fixed goal structure described in Chapter 3.

7.3 Socio-Economic and Internet Usage Profiles

The next step was to analyse the socio-economic and Internet usage profiles of each cluster. Analyses of the cross-tabulation as reported in Table 7.4 will give a better picture of each cluster of shoppers. Before assessing the profiles of each cluster, it will be enlightening to view the pattern across the clusters where significant differences can be discerned. There was a significant association between sex and monthly expenditure on online shopping and cluster membership. Female online shoppers tended to be state-oriented while male online shoppers were action-oriented. Female online shoppers were also more likely to experience flow in online shopping than male online shoppers. Online shoppers with low monthly expenditures on online shopping had only moderate levels of relevant knowledge whereas online shoppers with higher expenditures had higher levels of relevant knowledge due to their wider exposure. This supports the findings of Donthu and Garcia (1999).

While the relationship between other socio-economic variables and cluster membership was not statistically significant, due likely to the small sample size, analyses of the Phi and Cramer's V measures of association revealed that there was a relatively stronger relationship between cluster membership and marital status, educational achievement and income category than with other socio-economic variables. People who were single were less likely to engage in interactive actions while shopping online as compared to people who were married or in domestic partnerships. The latter group probably had to justify their online purchases to their significant others and to engage in consultation when making joint purchases. There was also an association between educational status and income category with the level of relevant knowledge utilised in online shopping. More well-educated and affluent online shoppers tended to have high knowledge levels of Internet technologies used in online shopping. This is likely to be due to their more extensive experience with the Internet and their higher purchasing power. This corroborates the findings of earlier studies like Li (2000) and Liao (2001).

Table 7.5 Association between clusters and socio-economic, Internet and online shopping usage variables

% of each cluster for the following variable categories:		Cluster				Chi Sq.	Sig.	Phi	Cramer's V
		1	2	3	4				
Sex *	Male	69.0	36.8	37.5	42.9	7.411	0.060	0.272	0.272
	Female	31.0	63.2	62.5	57.1				
Age Category	Under 30	48.3	47.4	62.5	39.3	4.225	0.646	0.206	0.145
	31-40 yrs	24.1	31.6	25.0	39.3				
	> 40 yrs	27.6	21.1	12.5	21.4				
Occupation Category	Students	44.8	42.1	50.0	28.6	4.277	0.639	0.207	0.146
	Professionals &managers	41.4	31.6	37.5	50.0				
	Others	13.8	26.3	12.5	21.4				
Income Category	Low Income	41.4	42.1	66.7	46.4	6.679	0.352	0.258	0.183
	Medium to high income	51.7	52.6	20.8	42.9				
Marital status (Single/in rel'ship)	Single/divorced/separated	34.5	52.6	62.5	67.9	10.656	0.100	0.326	0.231
	Married/dom'c partnership	65.5	47.4	37.5	28.6				
Educational achievement	Some college or less	24.1	31.6	20.8	14.3	7.306	0.605	0.270	0.156
	Bachelor's degree	27.6	15.8	33.3	39.3				
	Master's/PhD degree	48.3	52.6	41.7	46.4				
Residential Area	Urban	58.6	84.2	75.0	67.9	6.335	0.387	0.252	0.178
	Suburban	37.9	15.8	16.7	28.6				
	Rural	3.4	0.0	8.3	3.6				
Duration of Internet use	Less than 3 years	27.6	21.1	41.7	32.1	5.046	0.538	0.225	0.159
	3 to 5 years	27.6	31.6	37.5	35.7				
	> 5 years	44.8	47.4	20.8	32.1				
Duration of online shopping use	Less than 1 year	20.7	10.5	25.0	25.0	3.410	0.756	0.185	0.131
	1 to 3 years	62.1	57.9	45.8	53.6				
	> 3 years	17.2	31.6	29.2	21.4				
Monthly expenditure on online shopping*	Less than $50	72.4	26.3	66.7	60.7	12.355	0.055	0.351	0.249
	$50 - $100	17.2	57.9	29.2	32.1				
	> $300	10.3	15.8	4.2	7.1				
No. of product or service categories purchased	1 to 2 categories	44.8	26.3	45.8	46.4	2.384	0.497	0.154	0.154
	3 categories or more	55.2	73.7	54.2	53.6				

* Significant at the 0.10 level.

Percentages do not add up to 100 because "Rather not say" responses have been omitted.

7.3.1 Cluster 1

Cluster 1 was the largest of the four clusters, comprising 29 per cent of the sample. Cluster 1 shoppers were predominantly male and were mostly in relationships compared to shoppers in clusters 2, 3 and 4 who were mostly single. People who were married or in domestic partnerships comprised 65.5 per cent of cluster 1 in contrast to clusters 2, 3 and 4 where people who were either single, divorced or separated constituted 52.6, 62.5 and 67.9 per cent of the clusters respectively. This could explain the fact that cluster 1 shoppers were the most price conscious since they had to justify their purchases to their significant others. The fact that they were most likely to engage in interactive actions is probably because they needed to consult their spouses on joint purchases. Not surprisingly, given their price consciousness, cluster 1 had the highest percentage of shoppers spending less than $50 monthly on online shopping. They constituted 72.4 per cent of cluster 1 as compared to 26.3, 66.7 and 60.7 per cent for clusters 2,3 and 4 respectively.

7.3.2 Cluster 2

Cluster 2 was the smallest, comprising 19 per cent of the sample. It was predominantly female with 63.2 per cent females and 36.8 per cent males. Cluster 2 had the smallest percentage of inexperienced Internet users and online shoppers. Internet users who had used the Internet for less than three years comprised only 21.1 per cent of Cluster 2 as opposed to 27.6, 41.7 and 32.1 per cent in clusters 1, 3 and 4 respectively. Similarly, online shoppers who had shopped online for less than one year comprised only 10.5 per cent of Cluster 2 as compared to 20.7, 25.0 and 25.0 per cent for clusters 1, 3 and 4 respectively. This underlined the extensive experience which Cluster 2's members had with both the Internet and online shopping.

Cluster 2 shoppers also had the biggest monthly expenditure on online shopping, where 73.7 per cent spent more than $50 monthly. In contrast, the majority of online shoppers in clusters 1, 3 and 4 spent *less* than $50 monthly, with such shoppers comprising 72.4, 66.7 and 60.7 per cent of the three clusters respectively. Cluster 2 also had the largest proportion of shoppers spending more than $300 monthly. Cluster 2

shoppers also made online purchases from more product and service categories than any other cluster. An overwhelming 73.7 per cent of Cluster 2 had purchased three or more categories of products and services online compared to 55.2, 54.2 and 53.6 per cent for clusters 1, 3 and 4 respectively. Therefore, Cluster 2 members had the most broad-based experience with the Internet and online shopping and this contributed principally to their having a higher knowledge level than the other clusters. Not surprisingly, Cluster 2 had the largest percentage of people from the medium to high income groups amongst the four clusters. Cluster 2 shoppers were also the most well-educated with 52.6 per cent having a postgraduate degree, the highest amongst all four clusters.

7.3.3 Cluster 3

Cluster 3 shoppers comprised 24 per cent of the sample. It was predominantly female with 62.5 per cent females and 37.5 per cent males. This cluster had the largest proportion of young shoppers with respondents under 30 years of age constituting 62.5 per cent as opposed to clusters 1, 2 and 4 with 48.3, 47.4 and 39.3 per cent. Not surprisingly, students comprised the largest group of this cluster at 50.0 per cent compared to cluster 1, 2 and 4 where students comprised 44.8, 42.1 and 28.6 per cent of each cluster respectively. Cluster 3 shoppers were also predominantly single, with 62.5 per cent who were either single, divorced or separated. Cluster 3 mainly comprised people from the lower income group, who made up 66.7 per cent. Cluster 3 shoppers were relatively inexperienced with the Internet, with only 20.8 per cent of the cluster having used the Internet for more than five years as compared to clusters 1, 2 and 4 with 44.8, 47.4 and 32.1 per cent respectively.

7.3.4 Cluster 4

Cluster 4 was the second largest cluster with 28 cases. It had the largest percentage of professionals and managers who constituted 50 per cent, compared to clusters 1, 2 and 3 where professionals and managers constituted only 41.4, 31.6 and 37.5 per cent of each cluster respectively. This could explain the action-oriented and goal-directed approach of this cluster of shoppers, who led busy working lives and consequently had less time to spend on online shopping. They were generally well-

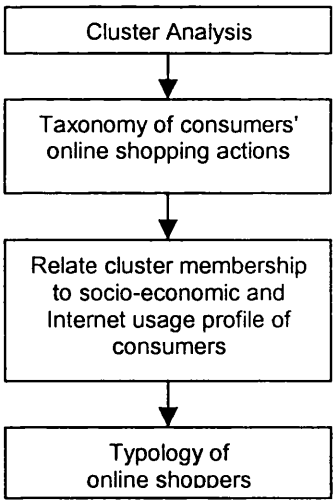
educated with 39.3 per cent having a college degree and 46.6 per cent having a postgraduate degree.

Cluster 4 also had the largest percentage of single people with 67.9 per cent who were either single, divorced or separated. With regard to age, Cluster 4 shoppers were fairly evenly spread across the three different age categories. Cluster 4 also had a fairly even mixture of people from low and medium to high income categories.

7.4 TYPOLOGY OF ONLINE SHOPPERS

The final step was to relate the four cluster taxonomy of typical online shopping actions with the socio-economic and Internet usage profiles of the cluster members. From this, a four group typology of online shoppers with distinct patterns of online shopping behaviour and differing socio-economic profiles was developed. Figure 7.1 is a diagrammatic representation of the procedure for developing the typology.

Figure 7.1 Procedure for developing a typology of online shoppers



7.4.1 Type 1: Action-oriented, price conscious deliberators

Type 1 shoppers can be described as action-oriented and price conscious deliberators. They are action-oriented and tend to have fixed goals in online shopping. As a result they are disinclined towards multi-tasking and are unlikely to experience flow during online shopping. They pay a high level of attention to their online shopping and tend to deliberate carefully rather than scan casually. They are extremely price conscious

but have a poor knowledge of Internet related technologies. Type 1 shoppers are predominantly male and are mostly in relationships. That explains their high propensity to engage in interactive actions during online shopping since they have to consult their spouses on their online purchases and perhaps justify them as well. Due to their price consciousness, they do not spend much on online shopping, averaging less than $50 monthly.

7.4.2 Type 2: Knowledge-driven, flow-oriented scanners

Type 2 shoppers are state-oriented and are prone to experiencing flow while shopping online. Their flow experience leads to prolonged exposure to the Internet, thereby increasing the opportunities for knowledge acquisition. They are therefore extremely knowledgeable about Internet technologies. They pay a high level of attention to their online shopping where their actions involve concentrating as well as scanning. Scanning is likely to occur in pre-purchase information search while concentrating occurs in pre-purchase decision-making. They are also likely to have varying rather than fixed goals while shopping online. Their high level of knowledge contributes to a greater understanding of the online retail market, and this makes them more discriminating and relatively price conscious. Type 2 shoppers have extensive experience with online shopping, in terms of the duration of their exposure to online shopping as well the range and amount of online shopping they have conducted. Type 2 shoppers tend to be female, highly educated and affluent, coming mainly from the medium to high income brackets.

7.4.3 Type 3: State-oriented, varying goal multi-taskers

Type 3 shoppers are less likely to have hierarchical-sequential online shopping action structures because they tend to multi-task offline as well as online. They are prone to experiencing flow while shopping online and this contributes to their moderate knowledge level. They are also state-oriented and tend to have varying rather than fixed goals. Type 3 shoppers are also more store conscious than price conscious. They tend to be young female students under 30 years of age and are predominantly single. That explains why they tend not to engage in interactive actions while shopping online given that they do not have to consult any significant others on their purchases. Type 3

shoppers are mainly from the lower income group and are also relatively inexperienced with the Internet.

7.4.4 Type 4: Action-oriented, store conscious goal satisfiers

Type 4 shoppers are extremely action-oriented and tend to have fixed rather than varying goals. They prefer not to multi-task and have strongly hierarchical-sequential online shopping action structures. They are unlikely to experience flow when shopping online because they focus on satisfying their goals rather than on surfing without an agenda. Given their minimal exposure to the Internet, they have a poor knowledge of Internet technologies. Type 4 shoppers are more store conscious than price conscious. They are highly educated and tend to be professionals and managers. This explains the action-oriented and goal-directed approach of this type of shoppers, who lead busy working lives and consequently have less time to spend exploring the Internet. They are predominantly single, therefore explaining their disinclination to engage in interactive actions since they have no need to consult anyone on their online purchases.

7.5 Conclusion and Suggestions for Future Research

In this chapter, the results of the pilot trial of the survey were analysed. A cluster analysis of action-related variables produced a four group taxonomy of typical online shopping actions. The socio-economic and Internet usage profiles of each cluster was then analysed and related to the four group taxonomy from which four online shopper types were generated: (i) action-oriented, price conscious deliberators, (ii) knowledge-driven, flow-oriented scanners, (iii) state-oriented, varying goal multi-taskers and (iv) action-oriented, store conscious goal satisfiers. The results show that typologising online shoppers according to their typical online shopping actions can produce meaningful groups of consumers with distinct action types. These action types can also be associated with particular socio-economic profiles and Internet and online shopping usage patterns.

The findings which can be drawn from the survey results are indicative rather than conclusive given the small sample size. The goal of the quantitative analysis of online shopping actions was to establish whether online shoppers can be meaningfully typologised according to the structural, cognitive and dispositional dimensions of their

online shopping actions. Hence, a pilot trial of only 100 respondents rather than a full-scale survey was conducted. Nonetheless, meaningful clusters of online shoppers with distinct action structures have indeed been generated from the pilot trial results. The results show that online shopping actions differ considerably with regard to their structural, cognitive and dispositional dimensions. Describing online shopping behaviour by only one of these dimensions, e.g. attitudes, without regard for self-regulatory processes such as flow and action-orientation, can severely undermine our understanding of online shopping behaviour. The results also show that the numerical taxonomic approach is extremely useful for a multi-variable, multi-dimensional analysis of online shopping actions which takes into account several action dimensions simultaneously.

In light of these findings, some suggestions for future research can be made. First, the questionnaire design can be improved upon. For ease of interpretation and analysis, the binary multi-tasking online, multi-tasking offline, interactive action and hierarchical-sequential structure variables can be operationalised as Likert scale items instead of binary questions. Similarly, the ordinal knowledge level variable can also be operationalised as Likert scale items. This will increase their variance. Second, the number of items for some variables can be increased to strengthen the reliability of the measure. For example, propensity for casual scanning and propensity for concentrating should be measured by two items instead of one item each to increase reliability. Third, the survey can be administered on a larger and more representative sample of the US online shopping population.

PART IV – QUALITATIVE USABILITY ANALYSIS OF RETAIL WEBSITES

8 *QUALITATIVE USABILITY ANALYSIS OF RETAIL WEBSITES*

Analysing the action structure of online shopping acts and appreciating the social psychological significance of its component actions aids our understanding of how online shopping actions are facilitated or impeded by the architecture of online retail interfaces. This understanding provides the basis for a qualitative analysis of the usability of online retail sites. There is widespread agreement on the types of features and content which retail websites should offer to their customers for greater website usability. This study differs in that it will identify the "value-added" features which will take into account the typical behavioural traits of online shoppers, thereby helping consumers to complete online transactions at a higher level of ease, comfort and usability.

This chapter begins with a discussion of the salient behavioural traits of online shoppers' interactions with retail websites in light of the thesis' earlier findings. The ability of retail websites to accommodate these behavioural traits will heighten their usability amongst online shoppers. These traits therefore serve as humanistic rather than mechanistic criteria for assessing website usability. Website features which accommodate or promote these behavioural traits serve as objective indicators of these criteria. The usability of websites of four product and service categories will be studied - books, CDs, travel-related services and clothing/apparel. For each category, two contrasting websites will be selected for analysis – one which is more likely to promote state-orientation and the other, action-orientation – to allow for a more comparative discussion of website usability. A brief discussion of the social and commercial implications of the study's findings, its limitations and opportunities for future research will conclude the chapter.

8.1 SALIENT BEHAVIOURAL TRAITS OF ONLINE SHOPPERS

From the qualitative analysis of online shopping actions in Part II of the thesis, twelve salient behavioural traits of online shoppers were identified based on their prevalence and strength of influence on overall online shopping behaviour. Broadly, these traits can be classified into the categories of product search traits, decision making

traits and general shopper-store interaction traits. The following sections discuss these twelve behavioural traits and their objective indicators, i.e. website features which accommodate these traits. These features will first be identified from existing literature on website usability, reviewed in Chapter 1, section 1.7.6. The absence, presence, form and affordances of such features will then be used to qualitatively analyse retail website usability from a humanistic, user-centred perspective. These features are not exclusive to each trait and some may be used in more than one category, .e.g. audio-visual stimuli are features which accommodate both consumers' potential for affective response as well as flow experience.

8.1.1 Product search

Shopping involves searching for products and product-related information. This exercise constitutes the bulk of shopping activity. Several human factors influence product search behaviour in conventional shopping and these become even more pronounced in online shopping:

8.1.1.1 Interest in efficient product identification

Taking into account the complexity of the Web's hypertextual nature and given that much of online shopping behaviour is purpose-driven (Jupiter Media Metrix and NPD 2001), online shoppers want and need to locate products and services on websites quickly and with minimal effort. As discussed in Chapter 4, online shoppers typically use search engines to locate online retail sites. Once they enter the retail site, they tend to use search engines provided by the site to locate specific products. A site which does not provide a search engine compels the shopper to click on different hyperlinks to locate the product. This is a tedious process which undermines the shopper's efficiency. Therefore, the provision of a search engine is integral to improved usability.

At the same time, consumers tend to have some criteria in mind for the products which they require, e.g. price, brand, style, colour. Typically, they adopt a funnelling approach where they shortlist products according to the most important criterion, and then apply a second criterion to select products from this short list and so on until they

single out the product which best meets their criteria. This can be a laborious process given the multi-layered nature of many retail sites which expect the consumer to go through a series of web pages to identify the desired product. Online stores can facilitate the shopper's search by providing a multiple-criteria search engine where shoppers can input their preferences for different criteria. To further expedite product identification, a service which enables the online shopper to sort the list of search results according to different criteria such as brand, price or customer ratings will also be beneficial.

Therefore, the ability of websites to take into account the online shopper's interest in efficient product identification is an important usability criterion. Objective indicators of this criterion will be the provision of search engines (Barnes and Vidgen 2001; Liang and Lai 2002; Ranganathan and Ganapathy 2002) and multiple-criteria search engines by the retail website, as well as the provision of a sorting service for search results. In the absence of a search engine, the provision of a site map is also helpful because it provides a broad overview of the website and its component sections. However, this service is still inferior to providing a search engine device. Ease of navigation is also an important prerequisite for efficient product identification.

8.1.1.2 Ignorance of appropriate product terminologies

Online shoppers have varying knowledge levels about e-commerce in general, search engine functions, website design and appropriate product terminologies and nomenclature. Since a large proportion of product search in online shopping involves the use of text-based search engines, ignorance of appropriate product terminologies is a great hindrance to the product search process. This problem is compounded by the fact that many products are referred to by a variety of names, some less common than others. As a result, online shoppers experience difficulty in keying in the appropriate terms to describe the products which they want to locate.

In this regard, search engines should be designed to be more intuitive and to recognise not just exact search terms which utilise proper terminology, but be able to recognise proximate or analogous terms. For example, a consumer who is trying to locate a cellular phone should be able to key in the terms "cell phone", "mobile phone" or "hand

phone" and still find a cellular phone with equal success. This has important implications for trans-national retail websites which cater to consumers of different nationalities and who are accustomed to region-specific product nomenclature. Therefore, the ability of websites to take into account online shopper's ignorance of appropriate product terminology is another humanistic criterion for website usability. This usability criterion will be operationalised as the provision of intuitive search engines and the use of visual indicators (Ranganathan and Ganapathy 2002).

8.1.1.3 Propensity to experience information overload

Websites should also be designed to accommodate Internet users' propensity to experience information overload. In this regard, the readability of information is key. In recognition of the fact that web users scan rather than read, it is important that information be presented in a scannable bulleted or point form (Patsula 2001). The ability to sort search results according to criteria such as brand, cost and price also help online shoppers to make better sense of search results. Objective indicators of this usability criterion will be readable text, scannable text (Nielsen 2000; Nielsen and Tahir 2002), sorting service for search results, consistent interface style (Aladwani and Palvia 2002; Liang and Lai 2002) and hierarchical product organisation (Liang and Lai 2002).

8.1.2 Decision making

When the time comes for the consumer to decide on the product or service which he/she wants to buy and when and how he/she completes his transaction, several behavioural traits are significant:

8.1.2.1 Need for trust and reliability indicators

Before an online shopper is prepared to complete a transaction via the Internet, he/she needs to be assured that the particular online store is trustworthy and reliable. Due to the fact that the purchasing process is executed through an inhuman computer interface, the existing trust indicators to which humans are accustomed are unavailable. As discussed in Chapter 5, when assessing the trustworthiness of online stores, online shoppers do not have strict criteria but use a variety of intuitive, informal methods.

Therefore, instead of focusing on objective indicators of trust such as security seals of third party organisations like Verisign, this study will use informal, less tangible indicators of trust to operationalise this criterion. These indicators include a professional appearance (Barnes and Vidgen 2001), claiming the security of transactions (Nielsen 2000; Nielsen and Tahir 2002), accurate and timely information (Wan 2000; Yang and Peterson 2001; Zhang and von Dran 2001), functionality, clear and accessible contact information (Barnes and Vidgen 2001; Aladwani and Palvia 2002; Ranganathan and Ganapathy 2002) and humanistic interaction rituals like greetings and small talk (Cassell and Bickmore 2000).

8.1.2.2 Interest in sampling product

As discussed in Chapter 5, the psychological purse of online shoppers is actually smaller than that of a conventional shopper as he/she is unable to sample a product before purchase. Offering the online shopper the means for sampling products will therefore heighten a retail website's usability. For certain product genres, product sampling is fast evolving from a value-added to a basic service which online shoppers expect as a matter of course, e.g. digitised music and video samples. Such product trial facilities are indicators of a retail website's ability to accommodate online shoppers' interest to sample products prior to purchase (LaRose 2001).

8.1.2.3 Interest in obtaining product guidance

Consumers often seek the guidance of other consumers who have bought or tried a product before. This need for product guidance becomes even more acute for online shoppers as they are unable to test or sample the products and services offered online. Several online services offer product guidance by other consumers, e.g. reputation systems (Resnick, Zeckhauser et al. 2000), customer ratings (Wan 2000), customer reviews and customer chat rooms all of which can be objective indicators of this usability criterion.

8.1.2.4 Interest in communicating with others

While online shopping is predominantly an independent and solitary process, there is evidence that online shoppers occasionally wish to consult their significant others on their purchases. At the same time, they sometimes feel the need to share a particular piece of product information with their family or friends. The ability to contact someone directly from the retail website is therefore a boon. Online retail sites can expedite this process by providing the interaction facilities within their own sites. Indeed, many news and information websites are already providing "Email this article to a friend" facilities. However, this feature is still a rarity in retail sites. The provision of email (LaRose 2001), instant messaging and chat-room facilities (Wan 2000) will all be indicators of a retail website's ability to take into account online shoppers' needs for communicating with their significant others.

8.1.2.5 Potential for goal deferment

The potential to defer the fulfilment of purchase-related goals is high for online shoppers because if they can easily return to an online store at minimal time and financial costs. This tendency to defer decision-making and goal-fulfilment to a later time was detected in some interviewees. The phenomenon of "rehearsing" purchases, i.e. taking a transaction to its penultimate point just one step short of actual purchasing was also noted in several interviewees. This "rehearsal" process seems to help online shoppers to either prepare themselves mentally for making purchases or for considering more thoroughly the consequences of their purchases.

Online stores have to take such behaviour into account and make it easier for online shoppers to store their product considerations rather than to start over every time. Given the convoluted nature by which online shoppers often arrive at relevant webpages which feature their desired products, and that it is rather difficult to return to a website and locate the exact thing which they were previously planning to buy, retail websites should aid online shoppers by allowing them to save their shopping baskets for re-consideration at a later time. Therefore, objective indicators of this criterion are the

provision of services which enable online shoppers to save their shopping baskets, store wishlists and shopping lists (LaRose 2001).

8.1.3 Consumer-online store interaction

Online shoppers also display behavioural traits which are present not only during the product search and decision making stages but throughout the entire online shopping process. These are traits which mark consumer-online store interaction in general:

8.1.3.1 Tendency to utilise scripts

As discussed in Chapter 4, the compatibility of online shopping with existing shopping methods needs to be increased to avert script conflict. Online stores need to mimic the real-life scripts for the services which they offer, e.g. by designing the pre-purchase processes according to a conventional shopping script, e.g. pick up the product, scrutinise the product around from all angles, find out the price, check for discounts or promotional offers, decide and buy. Websites which enable the online shopper to perform all these actions smoothly and intuitively will be seen as averting script conflict.

Adherence to typical online shopping scripts is also important as several actions in online shopping are so well-established that people recognise them as scripts as well, e.g. the process of keying in personal information, followed by credit card information. In the event that a retailer is introducing a unique online shopping script, it should educate the online shopper on its particular script by providing navigational aids such as breadcrumb navigation links, progression bars and site demos. Consequently, online stores which either avert script conflict or which proactively prepare and cue their consumers on their particular online shopping scripts will have heightened usability. The ability of websites to recognise the tendency for humans to utilise scripts in everyday activity is thus an important usability criterion. Indicators of this criterion include the mimicking of real life scripts (Cassell and Bickmore 2000) or the provision of navigational aids such as breadcrumb navigation links (Nielsen 2000; Nielsen and Tahir 2002), progression bars and site demos to cue users on online scripts.

8.1.3.2 Propensity to multi-task

As seen in Parts II and III of the thesis, online shoppers have a tendency to multi-task online and offline while they shop. They are thus liable to lose track of what is happening in each computer window, why he/she had clicked on a particular hyperlink or how he/she had arrived at that particular webpage in the first place. In this regard, it is useful for retail websites to provide online shoppers with flowcharts indicating which section of the website they are in, and also to enable them to return to the homepage of the website easily so that they may commence a different search if need be. Therefore, the ability of websites to accommodate online shoppers' propensity to multi-task is a key usability criterion. Objective indicators of this criterion are sitemaps, return to homepage buttons and breadcrumb-style navigation links which typically take the form of e.g. "Clothing > Women's > Clearance Sale > Pants and Skirts" at the top left corner of each webpage (Nielsen 2000; Nielsen and Tahir 2002).

8.1.3.3 Potential for affective response

As discussed in Chapters 3 and 4, when consumers experience positive emotions in shopping environments, their product evaluation and decision-making process are positively influenced. Retail websites which are designed to take into account the potential for affective response by online shoppers will be more pleasant to interact with and potentially more usable as a result. In the online shopping environment, pleasant audio-visual, multimedia stimuli help to induce positive affective responses (Hoffman and Novak 1996; Richmond 1996; Griffith, Krampf et al. 2001; Zhang and von Dran 2001). Positive affective responses are also more likely to occur in human-like computer interfaces (Preece, Rogers et al. 2002). Anthropomorphic features such as a more conversational style of addressing the interface user (e.g. "Welcome to Amazon"), the ability to ask the interface a question using plain English (e.g. AskJeeves.com) or the inclusion of screen characters would also be able to elicit positive affective responses. Opportunities for human contact, or for social and para-social relationships to develop in online store interaction can also evoke positive consumer affect in the form of store loyalty. Retail websites which offer avenues for mediated human contact have explored a

variety of means including setting up buying clubs (Butler and Peppard 1998; Liang and Lai 2002), establishing online communities (Hagel and Armstrong 1997) or hiring human spokespersons to become focal points for consumer affect and affiliation. Therefore, pleasant audio-visual stimuli, anthropomorphic interfaces and facilities for mediated human contact with the online store and its online communities are indicators of this usability criterion.

8.1.3.4 Potential for experiencing flow

High levels of media vividness in on-screen content can promote interface involvement (Dennis and Kinney 1998; Griffith, Krampf et al. 2001) and telepresence (Steuer 1992, p. 76) in computer-mediated environments which then induce the flow state in Internet users (Hoffman and Novak 1996). Online shoppers who experience flow while surfing online stores exhibit more exploratory behaviours, have more positive affective feelings and express greater satisfaction with their online shopping experience. Therefore retail websites which can induce the flow state will become more "usable" in the sense that online shoppers will derive more enjoyment from the online shopping process and benefit from increased learning. Objective indicators of this usability criterion will be the inclusion of audio-visual stimuli in websites. Given that online shoppers who experience flow exhibit more exploratory behaviour, their flow state will also be prolonged if the website has many links, sections and webpages for exploration. Therefore, another indicator of this usability criterion is the availability of many links, sections and pages for shoppers to explore.

8.2 Website Selection and Mode of Analysis

Retail websites of four product and service categories - books, CDs, travel services, and clothing/apparel – were analysed for their usability. These categories were selected because they are considerably diverse in terms of the inherent nature of the product/service and the type and extent of pre-purchase consideration required. They are also amongst the top five product and service categories purchased online in the US in 2000 (see Table 2.2). Only English-language websites were included in the study and to that end, retail websites of four major Anglophone countries – US, UK, Canada and

Australia – were considered. They were located using the search engine Google. For each search, only the first five pages of the search results were utilised given that Google lists search results in decreasing order of relevance. Only generic online stores with mass rather than niche markets were considered. Stores which did not have facilities for completing transactions online were also eliminated.

For each product/service category, two websites were selected and analysed, one website which was more likely to promote state-orientation and the other website, action-orientation. This purposive selection of contrasting websites with distinctly different affordances allowed for a more comparative discussion of website usability. Let us first discuss how websites which promote state-orientation and websites which promote action-orientation were distinguished. In light of the findings discussed in chapter 4, state-oriented online shoppers tend to be more susceptible to audio-visual stimuli such as online advertisements. Action-oriented online shoppers on the other hand, tend to be less susceptible to these distractions and instead focus mainly on features which aid efficient product identification such as search engines. Therefore, a website which would better promote or induce state-orientation would be one which has more audio-visual stimuli while a website which would better promote action-orientation would be one which provides means of efficiently locating, assessing and purchasing products.

The retail websites for each category were first classified as state-oriented and action-oriented based on the content of their homepages. The classifications were made by estimating the proportion of space occupied by audio-visual stimuli and graphical advertisements on the homepage of each website and that occupied by search boxes, product category listings, navigational guides and other devices for efficient product location. This method is based on Nielsen and Tahir's "breakdown of screen real estate" assessments (2002, p. 57). Estimates were made by measuring print-outs of homepages for their state and action-orientation components. After the classifications had been made, the most state-oriented and action-oriented website for each category were selected for qualitative analysis.

In analysing websites, it is important to distinguish between content and design (Huizingh 2000). Methodologically, most analyses of websites have taken a content analysis approach which quantifies website features and content (McMillan 2000; Weare and Lin 2000). This study adopted the ethnographic content analysis approach used in an analysis of retail websites by LaRose (2001). Using this approach, the form and substance of website content and the affordances of website design features were qualitatively analysed to assess how well each website can accommodate the salient behavioural traits of online shoppers discussed in section 8.1. These behavioural traits and their corresponding indicators are summarised in Table 8.1. This list of indicators served merely as a guide for the qualitative analysis of websites and did not foreclose the possibility of other usability indicators being identified by the study.

BEHAVIOURAL TRAITS	USABILITY INDICATORS
Product search	
Interest in identifying product efficiently	search engines, multiple-criteria search engines, sorting service for search results, ease of navigation
Ignorance of appropriate product terminologies	intuitive search engines, use of visual indicators
Propensity to experience information overload	readable text, scannable text, sorting service for search results, consistent interface style, hierarchical product organisation
Decision making	
Need for trust and reliability indicators	professional appearance of website, functionality, accurate and timely information, good customer service, control trust mechanisms, seeking the customers' consent when installing personalisation devices, clear and readily available contact information, help facilities, human interaction rituals
Interest in sampling product	product trial facilities, e.g. virtual models for apparel, sample tracks of CDs, sample pages of books etc.
Interest in obtaining product guidance	reputation systems, customer ratings, customer reviews, customer chat-rooms
Interest in communicating with others	email, instant messaging and chat-room facilities
Potential for goal deferment	save shopping basket, wishlist and shopping list facilities
Consumer-online store interaction	
Tendency to utilise scripts	adherence to real-life scripts, navigational aids such as breadcrumb navigation links, progression bars and site demos, help facilities
Propensity to multi-task	navigational guides, sitemaps, easy return to homepage
Potential for affective response	pleasant audio-visual stimuli, anthropomorphic interfaces, human spokespersons, buying clubs, online communities
Potential for experiencing flow	audio-visual features

Table 8.1Summary of behavioural traits and examples of usability indicators

The navigation of each website proceeded from the homepage and all major links from the homepage to other webpages within the site were followed. Links to selected products from each major product category were also followed to the penultimate stage, i.e. keying in all personal information but stopping short of entering payment information.

The analysis of the websites was conducted between June and August 2002. In order to circumvent the transience of websites and to capture the appearance of the websites at the time of analysis, screen shots of the relevant sections of the websites were taken using the "Alt Print Scrn" function. These screen shots have been included in this chapter where appropriate. The analysis of the two websites of each product category was conducted concurrently within finite time periods in order to facilitate comparative assessment.

8.3 Books

The online bookstores were first short listed through Google using the search strings "'online bookstore' USA", "'online bookstore' UK", "'online bookstore' Canada" and "'online bookstore' Australia". From the initial shortlist of fifteen bookstores, two were selected for analysis – BooksAMillion.com (state-oriented) and Bookzone.co.uk (action-oriented). A comparative analysis of these two online bookstores follows.

8.3.1 Product search

With regard to being able to identify specific products efficiently, Bookzone was obviously superior even though both websites offered search facilities. Bookzone was designed specifically for efficient product search, with no effort made to distract the shopper with promotional offers or notifications of new book titles. Its search box was placed directly under the Bookzone masthead (Figure 8.1). In contrast, the search box for BooksAMillion was located at the top of the screen but in a non-descript, pale beige box which was overwhelmed by the bold colours used for advertisements and promotional offers dotting the rest of the homepage (Figure 8.2).

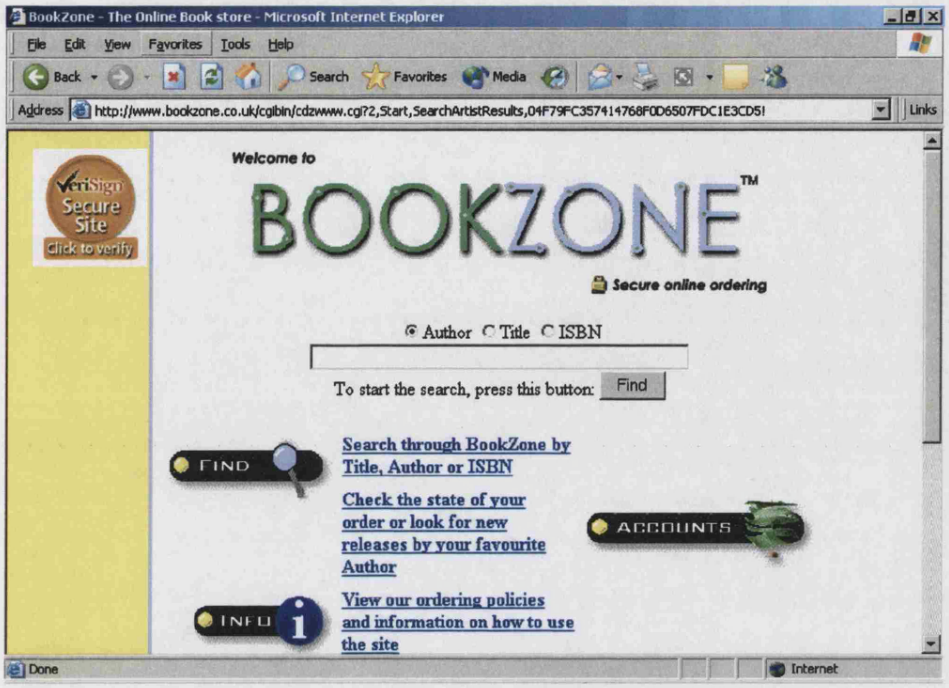


Figure 8.1 Bookzone's prominently located search box

Figure 8.2 BooksAMillion's search box obscured by promotional offers

Neither website provided multiple criteria search engines which would greatly expedite product search. Indeed, Bookzone's search device was restrictive as it

enabled the shopper to locate books only by Author, Title or ISBN number. BooksAMillion however offered several more categories including Keyword, Subject, eBooks, Bargains and Hard-to-Find. In this regard, the BooksAMillion search facility offered the shopper more flexibility as he/she may not be able to recall an exact book title but may know one or two keywords in the title or have a vague idea of its subject matter.

To test whether the websites could accommodate consumers' ignorance of appropriate terminologies, a search for books by Nigella Lawson was conducted given the current popularity of her books. The search string "nigella cookbook" was used to simulate the situation where a shopper is unable to recall an author's exact name or an exact book title but can remember fragments of information. Bookzone responded with "No matches found for Nigella Cookbook" but helpfully provided a link to matches to "Nigella" which led eventually to several book titles by Nigella Lawson (Figure 8.3). BooksAMillion responded with "Sorry, no items matched your search" but did not suggest any alternative links. Information on how to modify one's search for greater success was however provided (Figure 8.4).

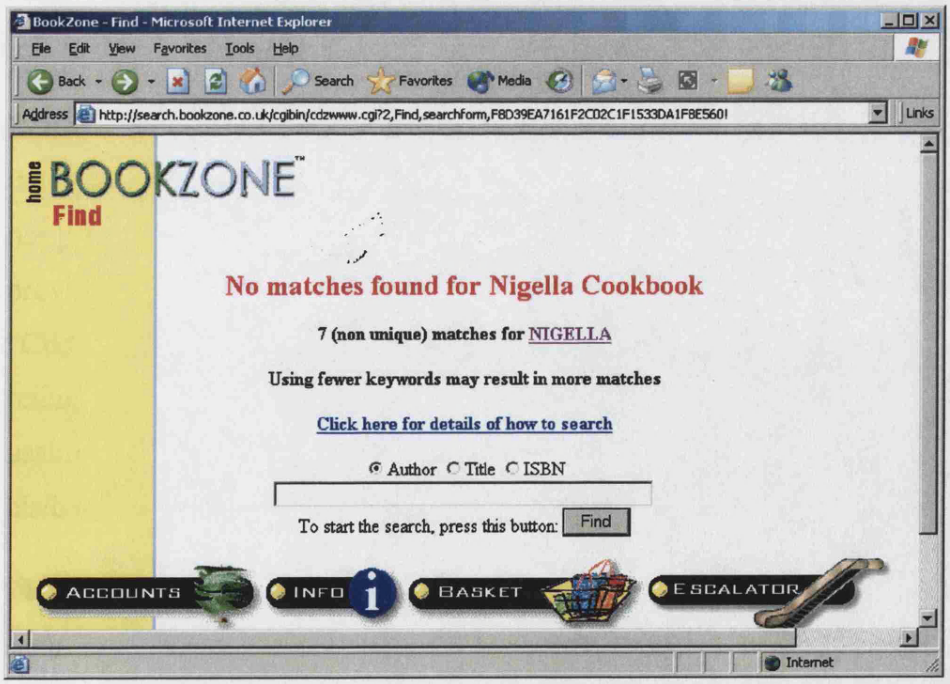


Figure 8.3 Bookzone's search results for "Nigella Cookbook"

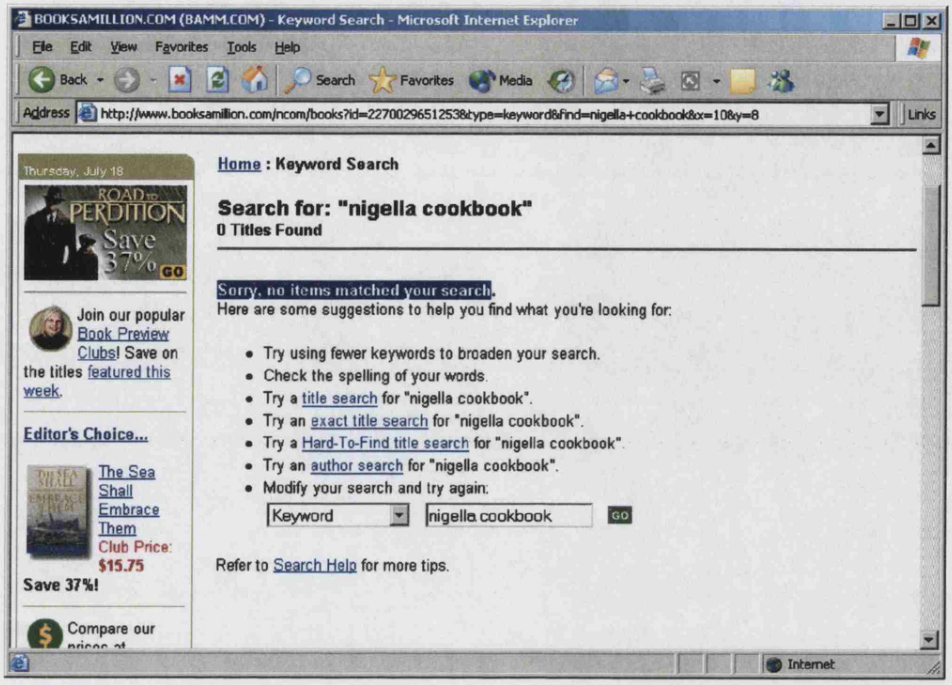


Figure 8.4 BooksAMillion's search results for "Nigella Cookbook"

A second search for books by Nigella Lawson was conducted and the deliberate typographical error "Lwason" was made. This was done to test whether the search engine was intuitive enough to sense that a typographical error had been made. BooksAMillion successfully responded with a link to Nigella Lawson. Bookzone on the other hand, responded with "No matches were found for Nigella Lwason" and did not proceed to suggest that a typographical error had been made. Instead, a link was provided to authors whose names began with "Nigella". A link was also provided for "Click here for details on how to search" which helps to educate the user on how to refine his search. This is a useful aid for online shoppers and can be considered a usability indicator – the provision of search tips when a shopper is unsuccessful in his/her search.

Both bookstores shared certain features which minimise information overload such as providing readable and scannable text and adopting a consistent interface style. But in terms of general appearance, the possibility of experiencing information overload was minimised at Bookzone because the website was mostly bare and listed only requested information. It did not provide suggestions on other books or information on related products. This made zooming in on the required information

simple and efficient. At BooksAMillion however, information overload was more likely to occur due to the many features crammed into the homepage and the numerous book titles featured. Much of the screen was occupied with copious bodies of text describing new book titles and graphics of book covers. However, in terms of the presentation of search results, BooksAMillion performed better than Bookzone in terms of alleviating information overload. A test was conducted to see whether search results could be sorted in a search for books by the popular and prolific author John Grisham. While Bookzone listed a series of twenty-three book titles in no particular order (Figure 8.5), BooksAMillion listed three of the most popular titles first, followed by another one hundred and thirty-two titles which could be sorted alphabetically or by release date (Figure 8.6). This hierarchical organisation of information made it easier to scan through the information and pick out specific book titles.

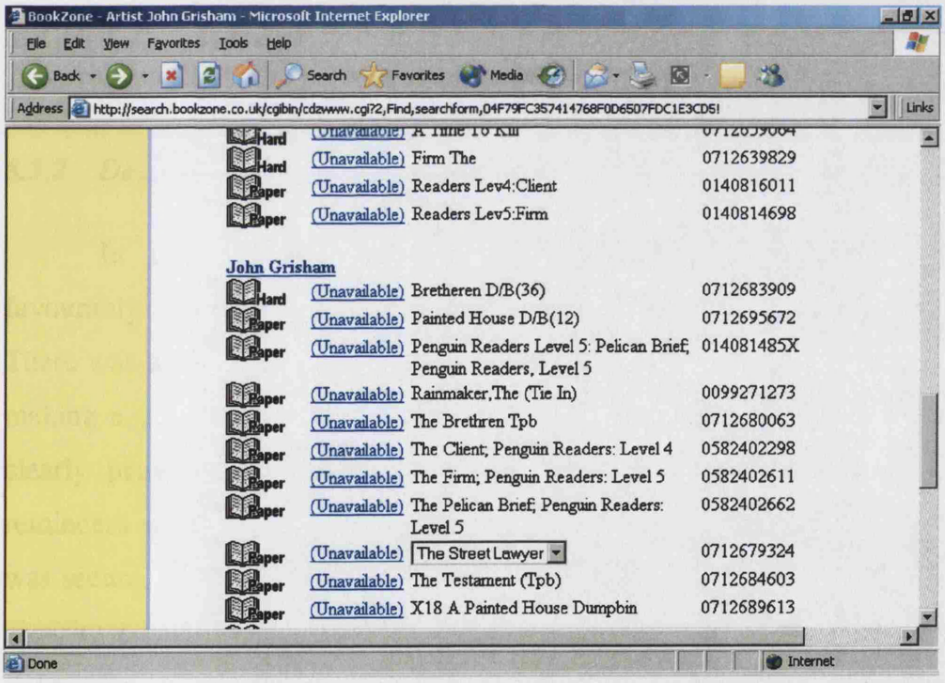


Figure 8.5 Bookzone's indiscriminate listing of book titles

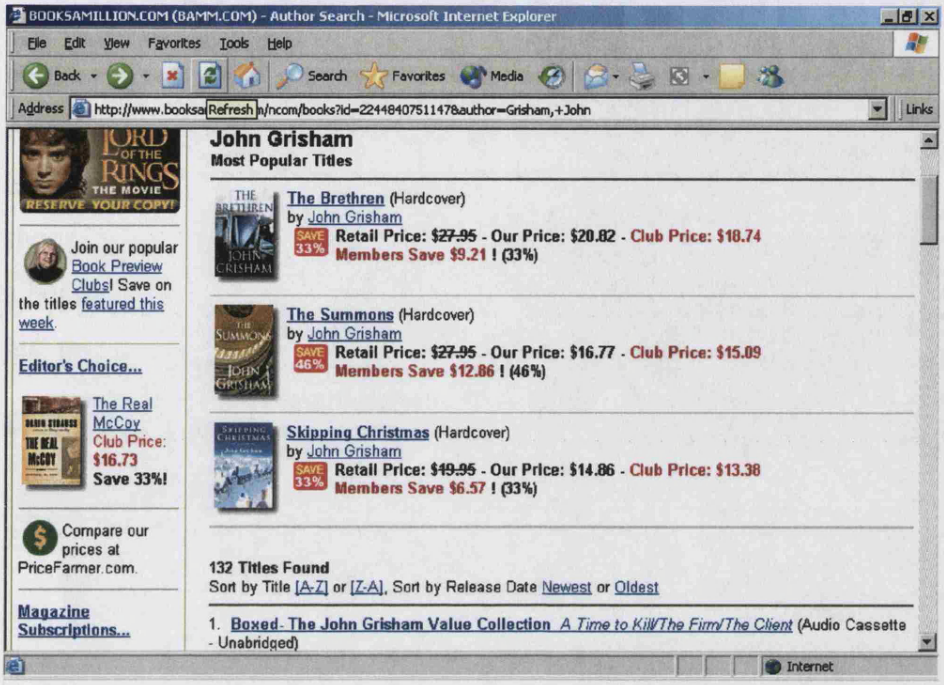


Figure 8.6 BooksAMillion's well-organised search results with sorting functions

8.3.2 Decision making

In terms of trust and reliability indicators, both websites performed favourably. Information was generally accurate and free of typographical errors. There was a general air of transparency to both websites as essential information on making a purchase, tracking orders, shipping, tax and contacting the store were all clearly provided. Their interfaces functioned well, had no glitches and several reminders were made to assure shoppers that the communication of payment details was secure, e.g. Bookzone's "*Details sent securely*" and BooksAMillion's "*For your security, complete credit card information is kept locked under military grade strong encryption, and cannot be accessed via the Internet.*"

With regard to facilities for product sampling, Bookzone provided virtually no opportunities. For the search on John Grisham books, only information on the price and availability of books was furnished. In contrast, BooksAMillion provided a three paragraph synopsis of the book and a book review. BooksAMillion was therefore superior in terms of providing facilities for product sampling. BooksAMillion also performed better in terms of providing product guidance from other shoppers. It

displayed average customer ratings for each book as well as information on other books purchased by customers who had also bought particular books. In these regards, Amazon currently has the best services amongst online bookstores. It has an innovative service for the sampling of books. Its "Look inside" facility allows shoppers to view the front and back covers, content page and several sample pages of a book. Amazon also enables shoppers to read reviews by other customers rather than just providing product rankings.

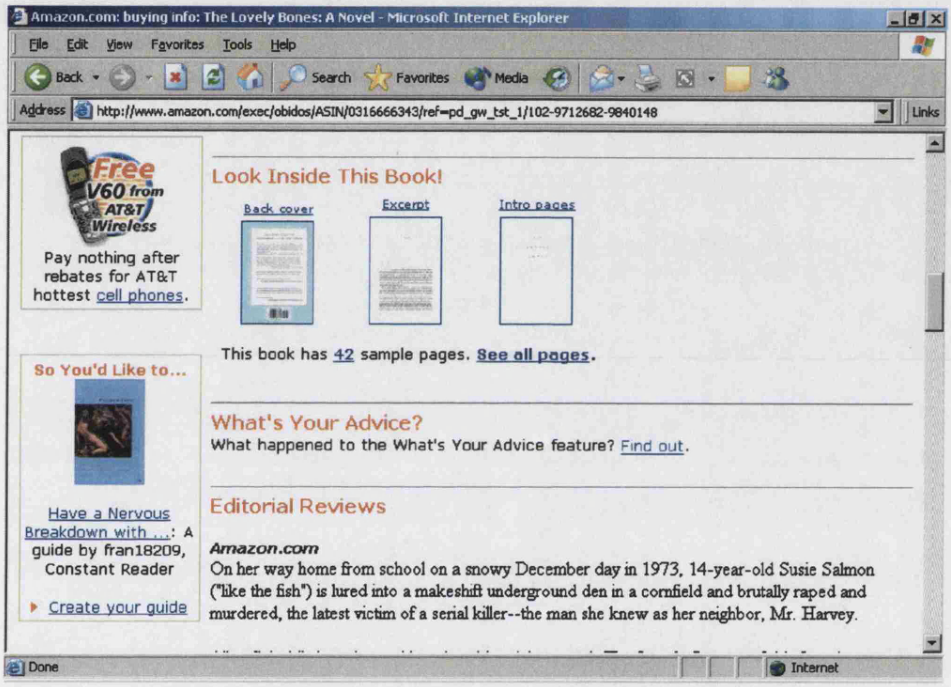


Figure 8.7 Amazon's useful "Look Inside This Book" sampling service

Both Bookzone nor BooksAMillion were unable to accommodate consumers' interest in communicating with others as neither provided facilities for shoppers to communicate with their family and friends.

However, both bookstores did provide services which could accommodate goal deferment. Bookzone offered a generic wishlist service for storing book titles for future reference. BooksAMillion also offered a wishlist service but it had an additional save shopping basket service. This service was of heightened utility as it enabled shoppers to save product considerations from specific shopping trips thereby enabling them to mull overtheir product considerations rather than having to make

hasty decisions: *"Unpurchased items will remain in your shopping cart for 24 hours. These items will remain in your shopping cart even if you close your browser and come back the next day."*

8.3.3 Consumer-online store interaction

In terms of the ability to accommodate consumers' tendency to utilise scripts in shopping, an excellent example is Amazon's "Look inside" service (Figure 8.7). This service mimics what shoppers typically do in bookstores when they are browsing for books. They pick the book up, look at the front cover, turn it around to look at the back cover, scan through the content page and then read a few sample pages. In this regard, the performance of Bookzone and BooksAMillion was fair as neither adopted the practice of adhering to the real-life script of shopping in a brick-and-mortar bookstore.

Indeed, Bookzone further impeded usability by straying considerably from the commonly accepted script for shopping in an online bookstore. Given the popularity of Amazon.com, the typical mode of selecting a product for purchase is widely accepted as clicking on an icon of a shopping trolley or basket. Instead, at Bookzone, the shopper was instructed to *"Click on the name of the Author to add it to your list of favourites; Click on the price to add it to your shopping basket*". BooksAMillion was therefore more usable in this regard as it had a straightforward "Buy it now" button for shoppers to click on. Therefore, should a website wish to introduce its own unique script for shopping, it should at least provide information on the steps involved in locating and buying products or include demonstrations on how the website works. Barnes&Noble is excellent example of this. It introduced a new browsing service and provided a video to demonstrate how the service works (Figure 8.8).

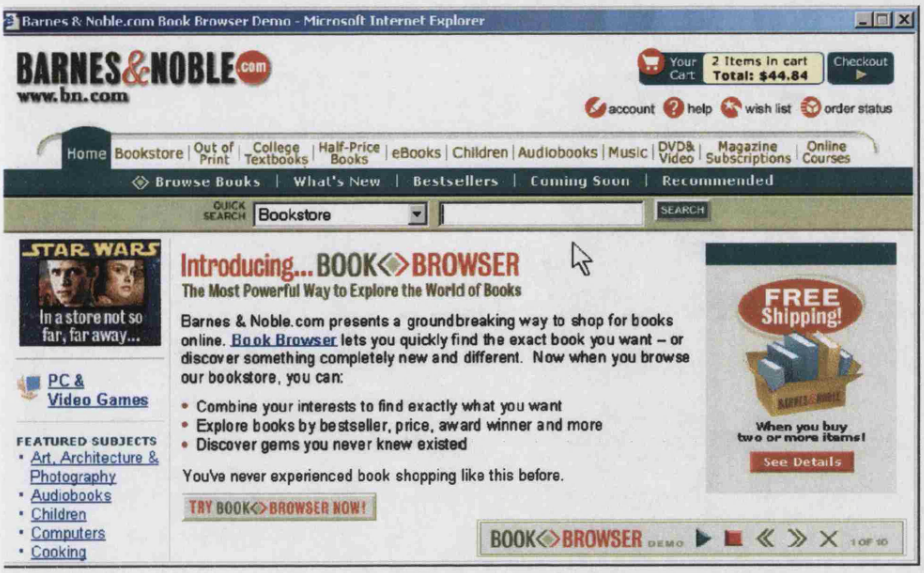


Figure 8.8 Barnes&Noble's demonstration video for its new book browsing service

With regard to the ability to accommodate online shoppers' propensity to multi-task, both websites made it easy for shoppers to return to their homepages through providing "home" buttons at the bottom of every page. BooksAMillion also provided breadcrumb navigation guides, e.g. "Home: Books: Business and Economics" which gave shoppers a quick summary of "where" they were in the store and how they had arrived there. In the online ordering process, both websites provided progression bars indicating the different stages of the transaction. Bookzone's four step purchase process was clearly numbered (Figure 8.9) and BooksAMillion's purchase process had a useful progression bar which lit up accordingly when each step was reached (Figure 8.9). Such features aid multi-tasking shoppers as they can interrupt their shopping with other activities but still be abreast of the onscreen developments when they resume shopping.

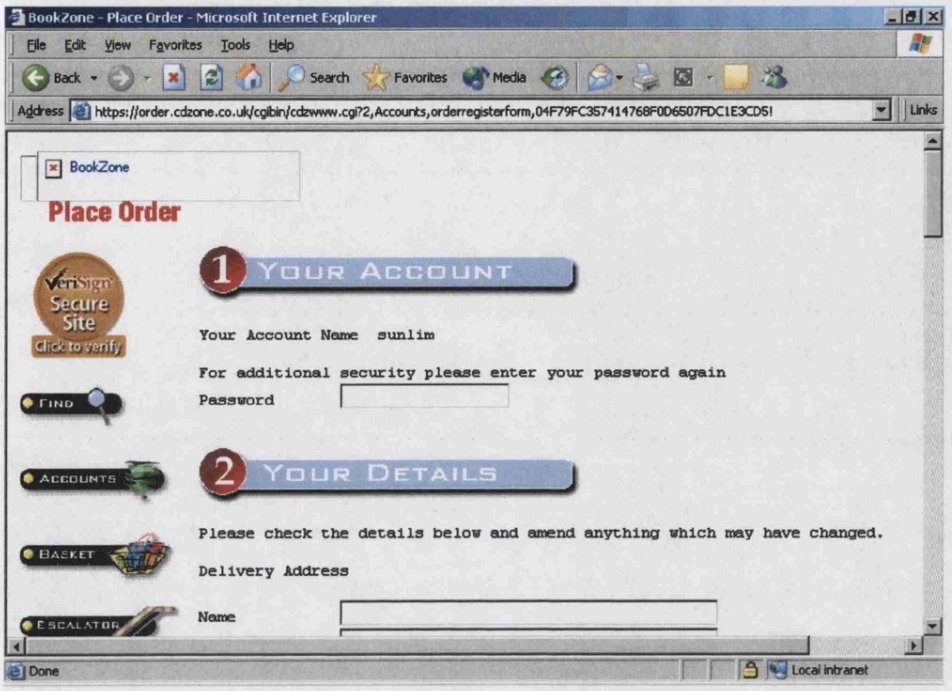


Figure 8.9 Bookzone's clearly numbered four step purchase process

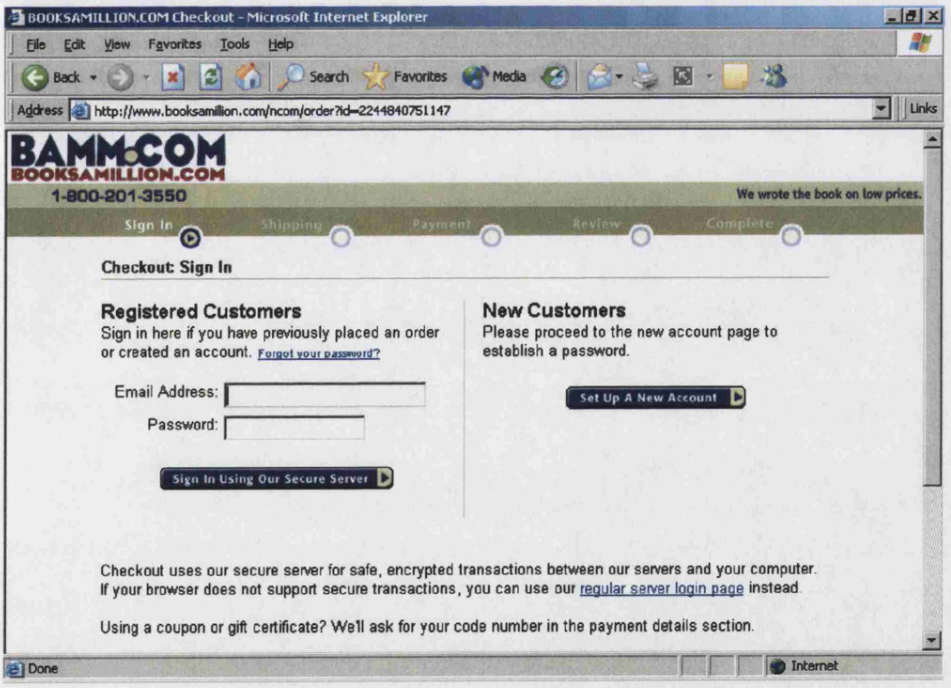


Figure 8.10 BooksAMillion's progression bar denoting purchase process stages

At Bookzone, there was little or no potential for the user to have an affective response to the website. The style of presenting information was neither friendly nor anthropomorphic but was instead curt and impersonal. Human spokespersons, buying

clubs and online communities were also absent. BooksAMillion differed markedly in this respect. Clicking on the link to BooksAMillion's book preview clubs led one to a personal message from the book preview club editor (Figure 8.11). The editor's pleasant-looking image accompanied the message and she signed off with a warm and friendly "*Pick a book club and start reading with us. You'll be glad you did! Thanks a million, Suzanne Beecher*".

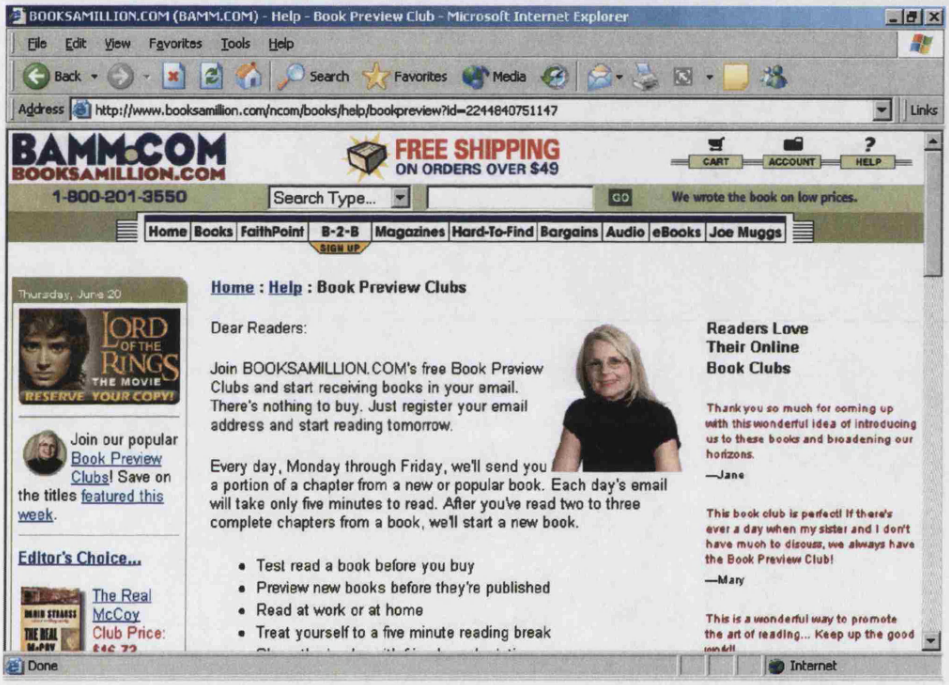


Figure 8.11 Message from BooksAMillion's Book Preview Club Editor and reader testimonials

Next to her message was a section entitled "*Readers Love their Online Book Clubs*" featuring positive comments from several readers on the joys and benefits of book club membership (Figure 8.11). Comments included the following:

> *"I can't tell you how much I enjoy this service! It's a real treat to be able to preview books like this. I start thinking about it each Sunday night, wondering what each week will bring. Thank you so much. - Dawn*
>
> *Thanks to this Online Book Club I feel as though I am able to get involved with books again. - Valerie*
>
> *I am enjoying this soooooo much. - Shirley"*

The use of emotive words like 'glad', 'treat', 'involved' and 'enjoying' are likely to arouse affect in shoppers. Her photograph may also arouse an affective response in a page dominated by words. Her "constant presence" on the website may also serve as a focal point for customer affiliation and possibly even loyalty. Unfortunately, there was no facility for Book Club members to share their views with one another. Such a facility would be even more effective in fostering a sense of community amongst the club members and this could potentially translate into store loyalty.

The likelihood of shoppers experiencing flow at Bookzone was slim as it had no audio stimuli and only visual stimuli in the form of book cover images. BooksAMillion differed considerably. The moment the website homepage loaded on the computer screen, a colourful pop-up window appeared at the top of the screen, alerting the shopper to a new book title on which he/she would enjoy forty-six per cent savings. The pop-up window featured an attractive book cover accompanied by the intriguing caption "*Terror abounds but music and love conquer*". A "View title" link, highlighted in bright yellow, was conveniently placed in the pop-up window thereby enabling readers to be led directly to further information on the book. Once the pop-up window was closed, the announcement "Free shipping on orders over $49" occupied most of the screen. It appeared twice, highlighted in bright red and was accompanied by a graphic. As the shopper scrolled down, there were numerous graphics of book covers, magazine covers, updates on the latest best sellers, "What's Hot!" and Editor's choice as well as an invitation to join the book club (Figure 8.12). The homepage was also dotted with red boxes with yellow, bold-faced text declaring "Save 31%" and "Buy it now!".

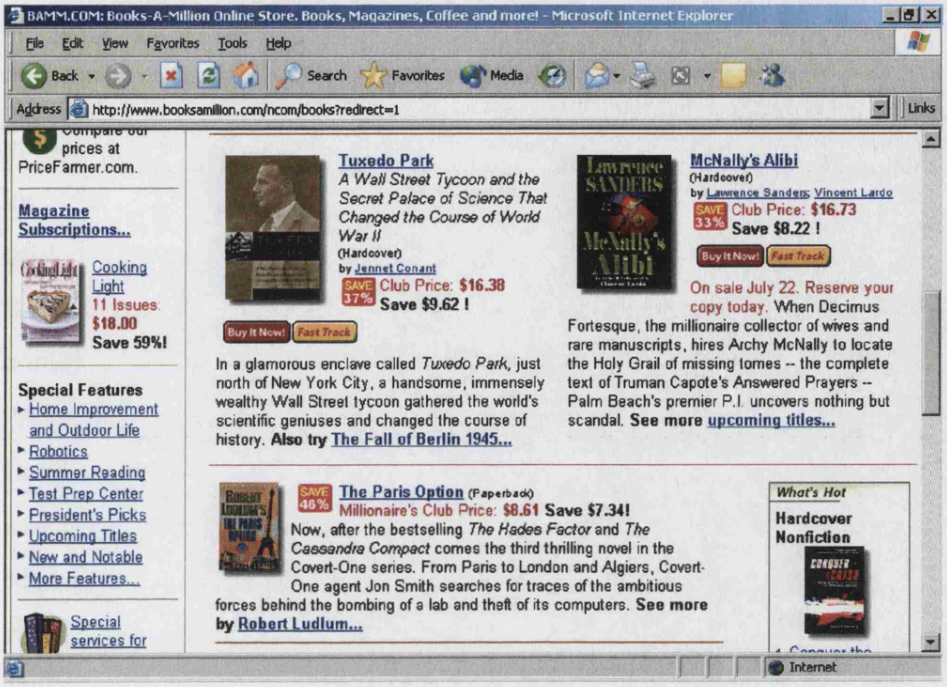


Figure 8.12 BooksAMillion's homepage dotted with colourful graphics and promotional offers

Potential for experiencing flow in BooksAMillion was also heightened by the numerous related links which shoppers could click on, e.g. accompanying the information on John Grisham's books were links to related subjects such as "Explore Related Items!", "Fiction: Legal" and information on what other customers bought. It was therefore possible for shoppers to click on one link after another to explore countless sections of the website and to digress from their original product search. Links to related topics were non-existent in Bookzone.

8.4 CDs

The online CD stores were first short listed through Google using the search strings "'online CD store' USA", "'online CD store' UK", "'online CD store' Canada" and "'online CD store' Australia". From the initial list of eleven shortlisted online CD stores, two were selected – MyMusic.com (state-oriented) and CDConnection.com (action-oriented). A comparative analysis of these two online CD stores follows.

8.4.1 Product search

Both MyMusic and CDConnection performed satisfactorily with regard to product location and identification. Both websites' search facilities were prominently located at the top of the screen, thereby ensuring their visibility. CDConnection offered no less than ten options for searching for products, from "Search by popular artist" to "search by mfg's label" to the more versatile "search for any fields containing..."(Figure 8.13). Similarly, MyMusic offered "Browse", "Search" and "Advanced Search" options. The "Advanced Search" option offered shoppers great flexibility in terms of keying in information from up to eleven possible fields to locate a product, effectively making it a multiple criteria search engine (Figure 8.14). MyMusic also positioned its "Search help" button right next to the search options which would be particularly helpful for shoppers who are new to the website or shoppers who are unsuccessful in their product searches. CDConnection on the other hand has a "search tips" link which is however located in a different section from the search options and is embedded in a host of other options such as "Information", "Order Status" and "Your Account". Overall, MyMusic's search facilities were superior to those of CDConnection.

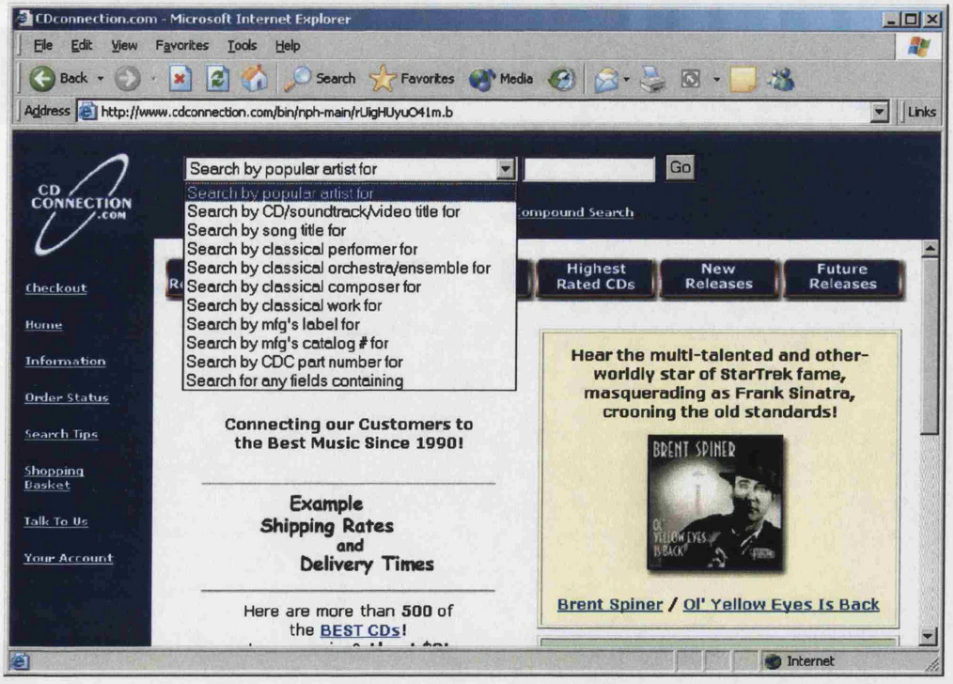


Figure 8.13 CDConnection's search service

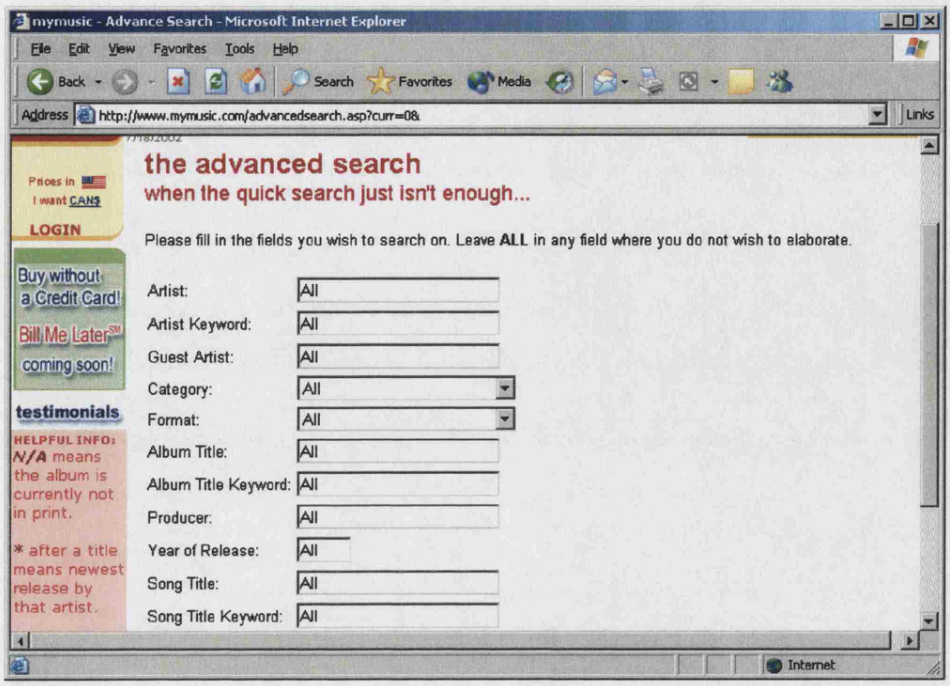


Figure 8.14 MyMusic's flexible, advanced search service

A search for music by the pop artiste Shakira, deliberately mis-spelt as "Shakeera", was conducted to test the two websites' ability to accommodate shoppers' ignorance of appropriate product terminologies. This search string was chosen given the current popularity of Shakira's music. MyMusic performed much poorer in this regard as it merely stated "Your search did not return any matches" (Figure 8.15). CDConnection on the other hand, suggested fifty-seven CD titles approximating "Shakeera". These ranged from "Boneshakers" to "Fantastic Shakers" and ultimately to seventeen "Shakira" titles (Figure 8.16). The CDConnection search engine was thus far more intuitive in its ability to recognise proximate terms and to accommodate typographical errors.

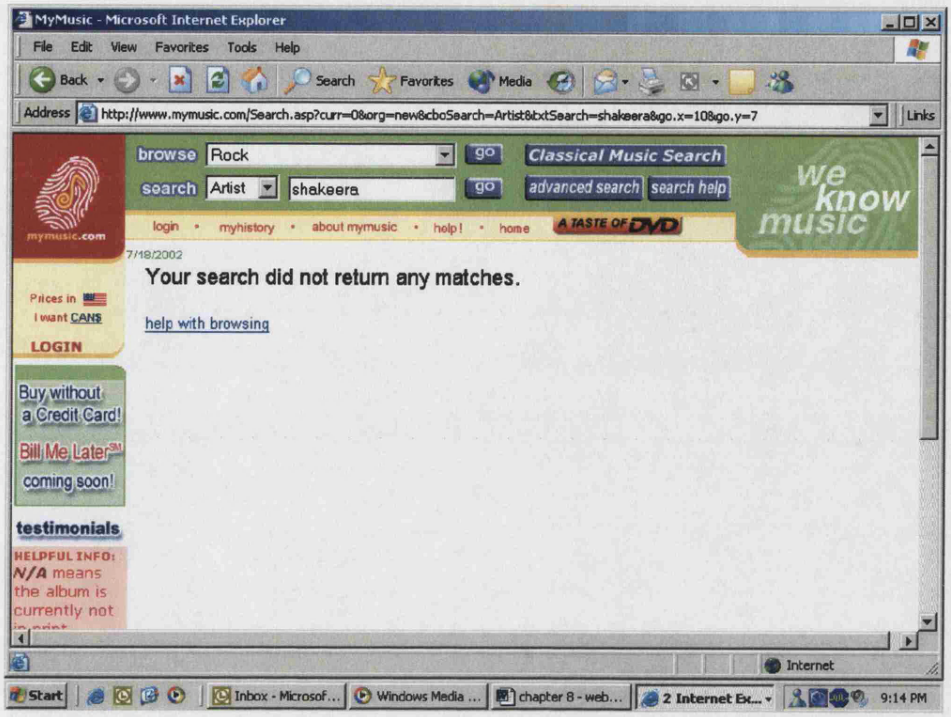


Figure 8.15 MyMusic's inability to recognise proximate terms

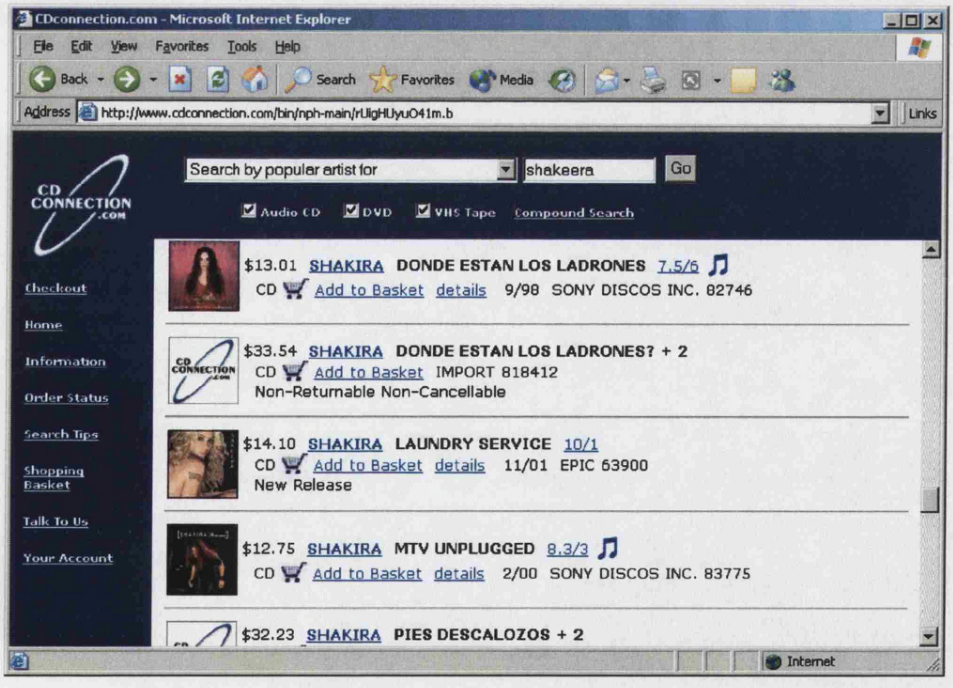


Figure 8.16 CDConnection's ability to recognise proximate terms and typographical errors

To test both websites' ability to present information in a manner which alleviates information overload, a search for CDs by Elton John was conducted.

CDConnection presented a list of ninety-two matches in no particular order. MyMusic had a vastly superior service. First it presented seven broad categories of search results (Figure 8.17). Once the link "Elton John" was clicked on, a series of CD titles was presented, accompanied by an alphabet selection device enabling shoppers to view Elton John's CD titles by their alphabetical classification. Clicking on the letter "G" for example led one to the CD titles "Goodbye Yellow Brick Road" and "Greatest Hits" (Figure 8.18).

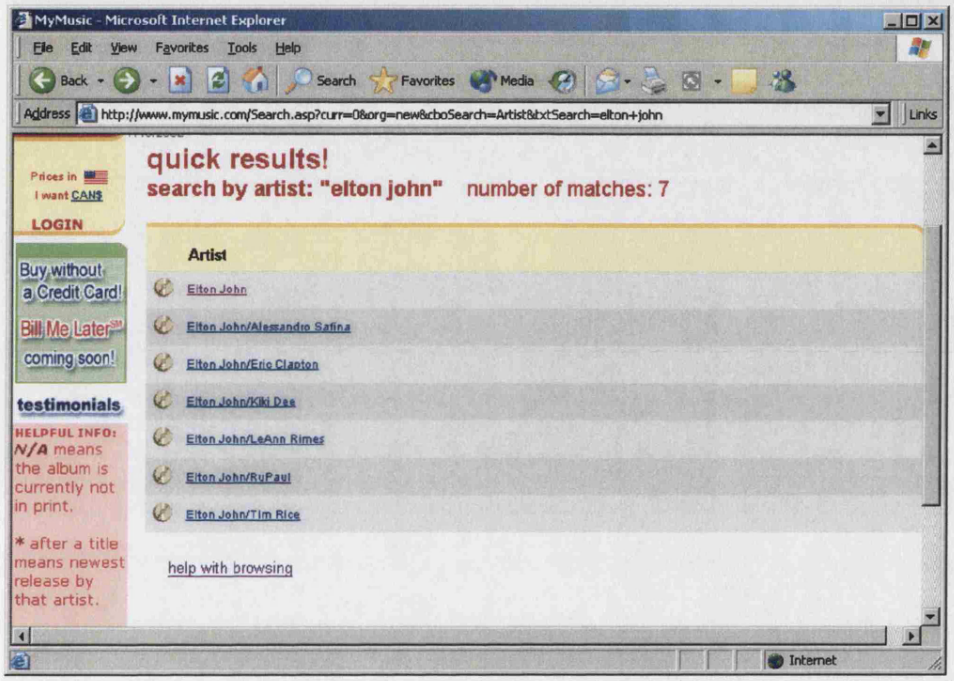


Figure 8.17 MyMusic's useful classification of search results

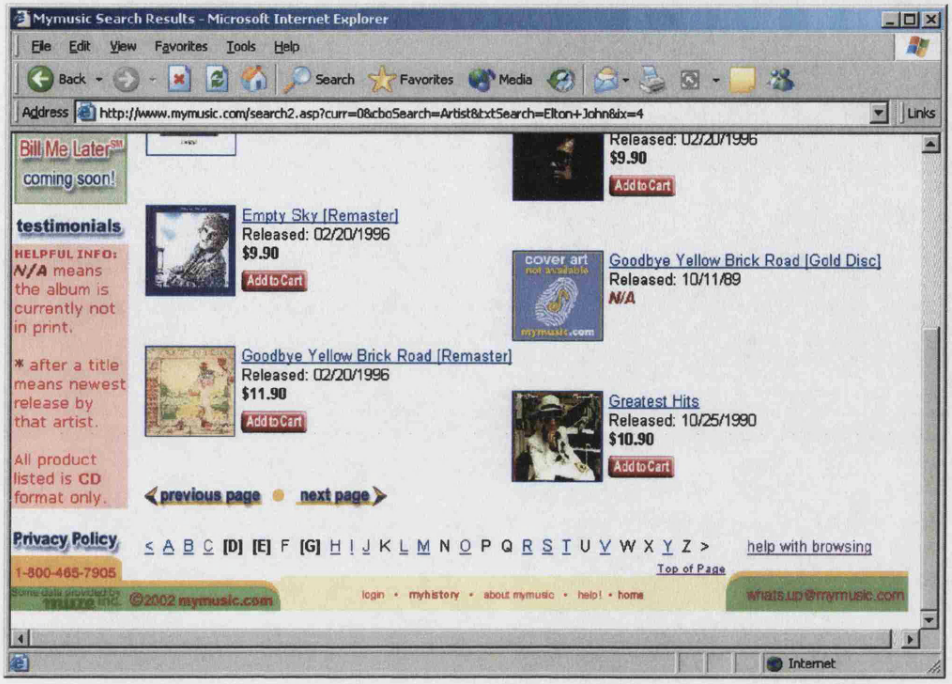


Figure 8.18 MyMusic's useful alphabetical classification of search results

8.4.2 Decision making

Both websites had more than adequate trust and reliability indicators. They both functioned well and extensive information on the website's policies and contact information was provided. Impressively, CDConnection's contact information and procedure could also be translated into five languages other than English. Overall however, MyMusic had an edge over CDConnection with regard to instilling trust in the shopper as it had a very effective "Testimonials" section which contained three pages of positive comments from the website's satisfied shoppers. Being first-person accounts, these testimonials were readable, candid and likely to leave an impression on first-time buyers (Figure 8.19). However, the button for the "Testimonials" section was not as prominent as it could have been since it was obscured by numerous colourful advertisements and announcements. Also, the word "Testimonials" may be too obscure and a straightforward "What customers like about MyMusic" would have been better.

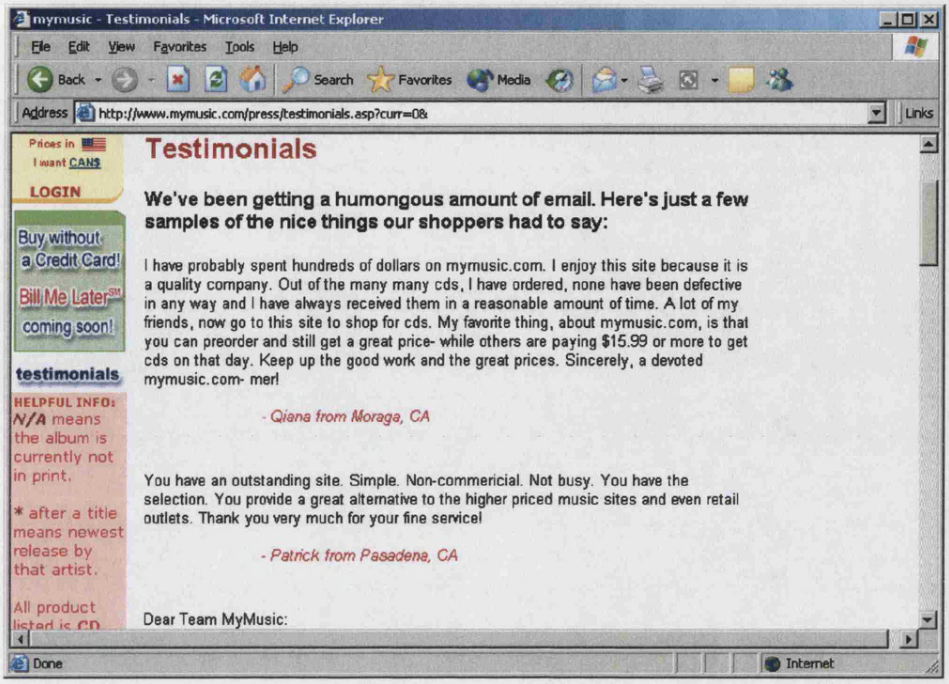


Figure 8.19 Testimonials from MyMusic's satisfied customers

With regard to providing services for product sampling, both websites performed equally well as sample tracks were available for most songs. Indeed, this service provided by online CD stores is superior to that of brick-and-mortar stores which are unable to provide sample tracks for almost every CD sold in the store. With regard to their ability to provide product guidance, both websites' performance was fair. CDConnection had an extensive "Golden Ears Society" rating system which is based on customer ratings (Figure 8.20). It also had a CD recommender which recommends CDs to shoppers based on correlations between CDs purchased and the Golden Ear ratings. MyMusic provided music critics' reviews from reputable music magazines such as Rolling Stone. MyMusic also graded the CDs but did not furnish information on what the grades indicated or how the grades were derived. CDConnection therefore fared better for providing quantitative product rankings while MyMusic was superior in providing qualitative reviews of CDs.

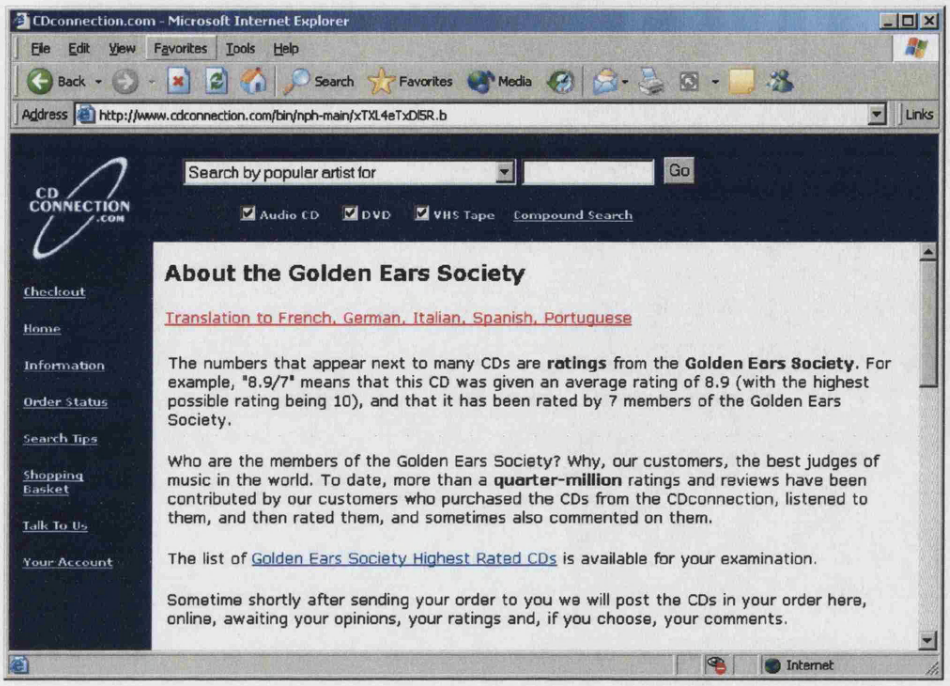


Figure 8.20 CDConnection's customer rating system

Neither CDConnection nor MyMusic provided facilities for their shoppers to communicate with their friends unlike CDNow which had a "Tell your friend about this album" service. This deficiency can work to both websites' detriment given the fact that music lovers tend to enjoy sharing music with one another as seen in the success of music-sharing websites like Napster and Gnutella. With regard to goal deferment, neither store offered any value-added services apart from CDConnection's save shopping basket service and MyMusic's wishlist service.

8.4.3 Consumer-online store interaction

Both CDConnection and MyMusic adhered rather closely to the typical online shopping script where clicking on CD cover graphics enlarged the CD covers for closer scrutiny and clicking on the title revealed more information on the different tracks. Also, CDConnection used the shopping cart icon to denote a purchase while MyMusic used an "Add to Cart" button. CDConnection also made the additional effort to brief shoppers on the essential steps in the purchase process, a useful aid for new shoppers (Figure 8.21). With regard to accommodating multi-tasking behaviour, neither website had any special features apart from the "Return to home" buttons and links.

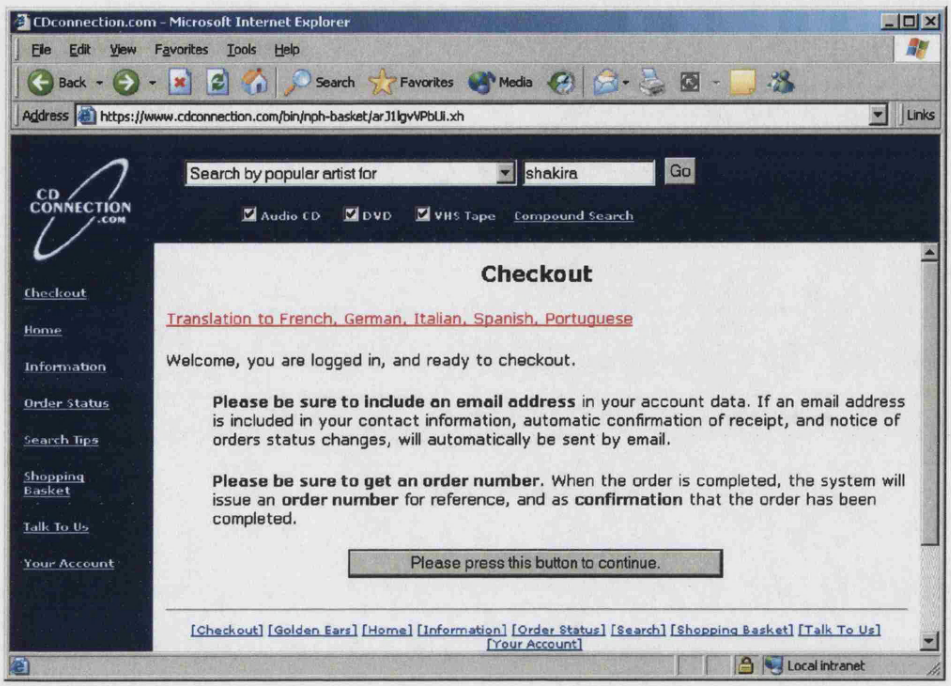


Figure 8.21 CDConnection's briefing on the essential steps in the purchase process

The possibility of having an affective response to MyMusic was high as the website was peppered with emotive exhortations such as "*Incoming! They're not released yet, but you can preorder any of these upcoming releases!*" and "*New Releases! Brand Spanking New! These releases hit the streets in the last 3 weeks. Mmmmm. Warm and fresh and steamy!*". These expressive ways of referring to CDs is somewhat atypical of online CD stores and is perhaps MyMusic's unique selling proposition. Music is often an object of affective response and these emotive phrases could potentially resonate with online shoppers' excitement about new music releases.

MyMusic also made it a point to "humanise" the store. The page explaining the philosophy of the MyMusic store stated:

> "We'd like to hear from you. This site is *for* you. We want you to be able to say 'this site is about *my* music.' We strive to offer you a different, better shopping experience. Please tell us what you think. How are we doing? Please let us know.
>
> p.s. We are real people.
>
> Janice, Stephen and the rest of the staff at mymusic.com."

Through this "humanising" approach, with the emphasis on the fact that they are "real people", MyMusic has the potential to foster para-social relationships with its customers. Its staff members were listed by name (Figure 8.22) and information on their likes and dislikes in music, their activities and their photographs were also provided (Figure 8.23). Such information may encourage online shoppers to develop a sense of identification and connection with staff members who have tastes in music which are similar to their own and this could potentially translate into store loyalty. CDConnection in contrast described CDs in purely factual terms and no attempt was made to put a human face to the website.

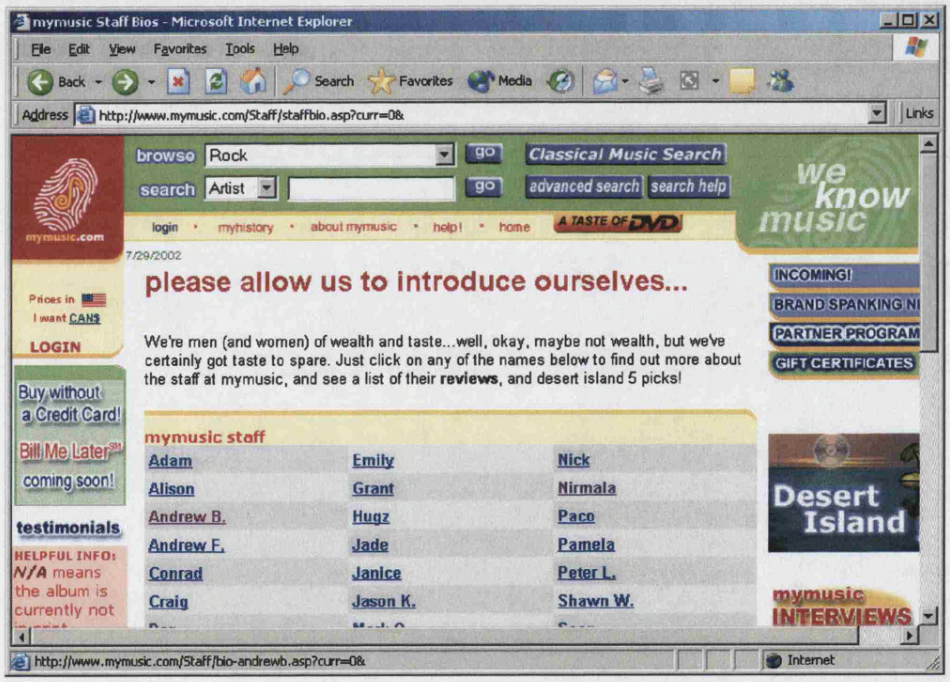


Figure 8.22 MyMusic's staff members are listed by name

Figure 8.23 Photograph and diary of MyMusic staff member Nirmala

MyMusic had many striking visual elements crammed into the homepage, all competing for the online shopper's attention including vivid graphics, strong colours and various attractive bargains emblazoned across some sections (Figure 8.24). This makes it difficult for the shopper to direct his focus to particular functions such as the search box. At the same time however, this may make it more likely for the online shopper to experience flow as he/she has plenty of audio-visual stimuli and a wide variety of links which he/she can continue to click on. CDConnection was in contrast a much plainer looking website. Its homepage was dominated by the search engine, the product categories and details on practical matters such as delivery times and shipping information (Figure 8.25). It is therefore better equipped to help shoppers identify products and purchase them efficiently than to induce the shopper to spend time browsing in a leisurely manner. The shopper is thus less likely to experience flow at CDConnection than at MyMusic.

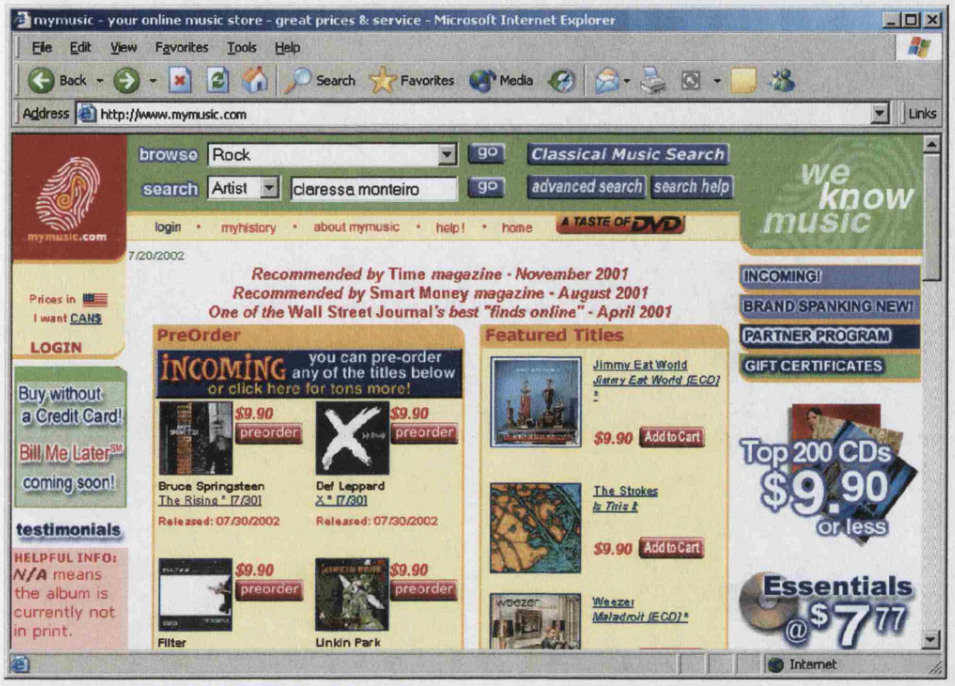


Figure 8.24 MyMusic's homepage packed with graphics and promotional offers

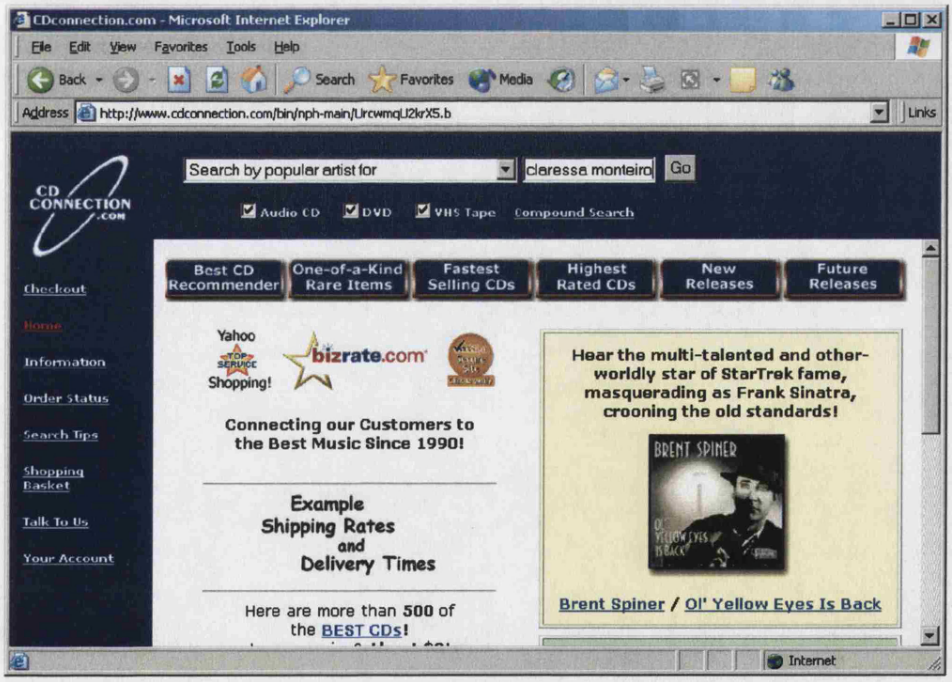


Figure 8.25 CDConnection's homepage dominated by search box and product categories

8.5 TRAVEL

The range of travel sites is rather wide considering that some sites deal with transportation, others with accommodation, some with tours, some with complete travel packages and some sites which cover all of these services. For this analysis, only generic travel websites with mass appeal, facilities for completing transactions online and which offer a complete range of transportation, accommodation and tour services were considered. Many airline booking websites were thus excluded. The online travel stores were first short listed through Google using the search strings "'online travel services' USA", "'online travel services' UK", "'online travel services' Canada" and "'online travel services' Australia". From the initial list of sixteen travel websites shortlisted, two were selected - Tripeze.com.ca (state-oriented) and Travelselect.com (action-oriented). A comparative analysis of these two travel websites follows.

8.5.1 Product search

Both websites had excellent multiple criteria search engines which allow shoppers to input a wide variety of information ranging from travel dates and times, preferred airlines and airports, number of passengers etc. Their search engines were also flexible, allowing shoppers to input either very specific or more generic information depending on their own schedules and priorities. Both websites' search engines were also able to accommodate journeys with multiple stops rather than just straightforward return journeys. The two websites' search facilities also had relative strengths and weaknesses. The Tripeze search engine interface had an edge over the Travelselect in that it provided a calendar next to the input box for travel dates which would greatly aid shoppers in planning their travels. However, the Travelselect search engine interface was superior in that it allows shoppers to specify the currency which they wish to use.[2] Travelselect also gives its shoppers the option of requesting all available fares or only the lowest fares available.

Both websites were also able to accommodate shoppers' ignorance of appropriate product terminologies such as the names and spellings of possible travel

[2] This is also a function of the fact that Travelselect serves a pan-European market while Tripeze serves a Canadian market. Nonetheless, it is possible for travellers from countries other than Canada to utilise Tripeze's services so a currency converter would be hepful.

destinations and airport and airline names by providing handy drop-down boxes listing all the options for these categories, on top of allowing shoppers to key in such details directly. However, Travelselect's search engine was more intuitive than that of Tripeze in recognising proximate rather than exact terms. A search for flights to Helsinki, deliberately mis-spelt as Helzinki, was conducted on both websites and Travelselect performed far better than Tripeze. Travelselect managed to suggest a list of possible city names including Helsinki (Figure 8.26) while Tripeze merely stated that it could not locate such an airport (Figure 8.27). Travelselect also had a handy "Explain options" button on its search engine interface which launched a pop-up window explaining the difference between "Lowest fares", "Multi-city journey" and "Flight by flight" options. Tripeze also provided tips on how shoppers can obtain the lowest fares but this information was placed in a small, discreet part of the website.

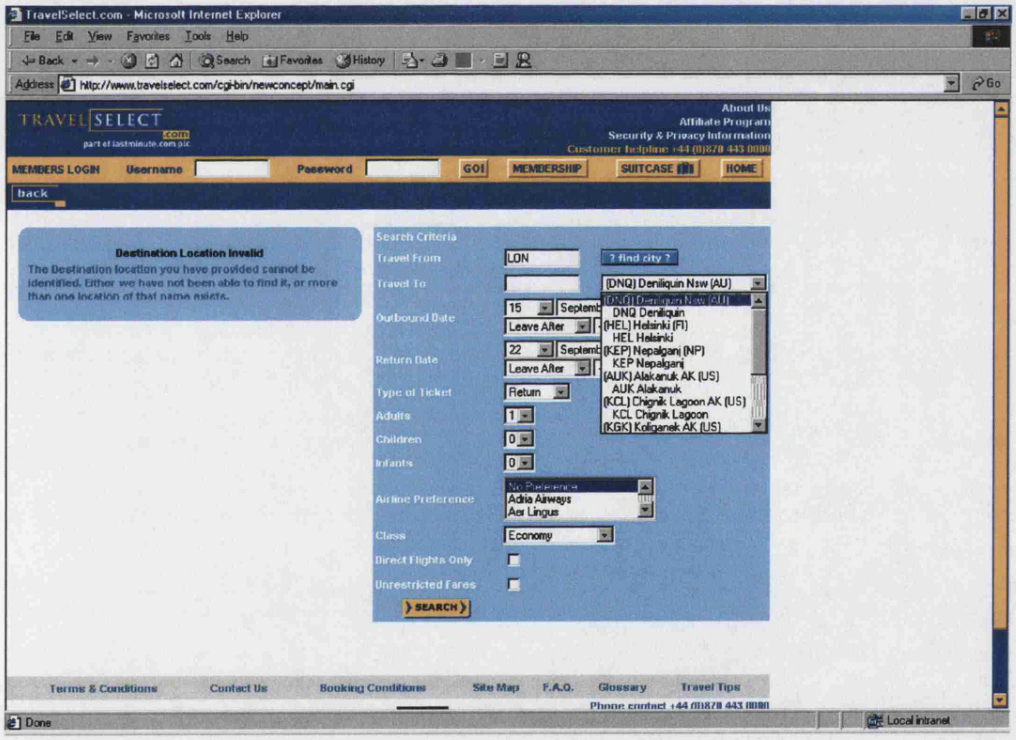


Figure 8.26 Travelselect's ability to recognise proximate terms and typographical errors

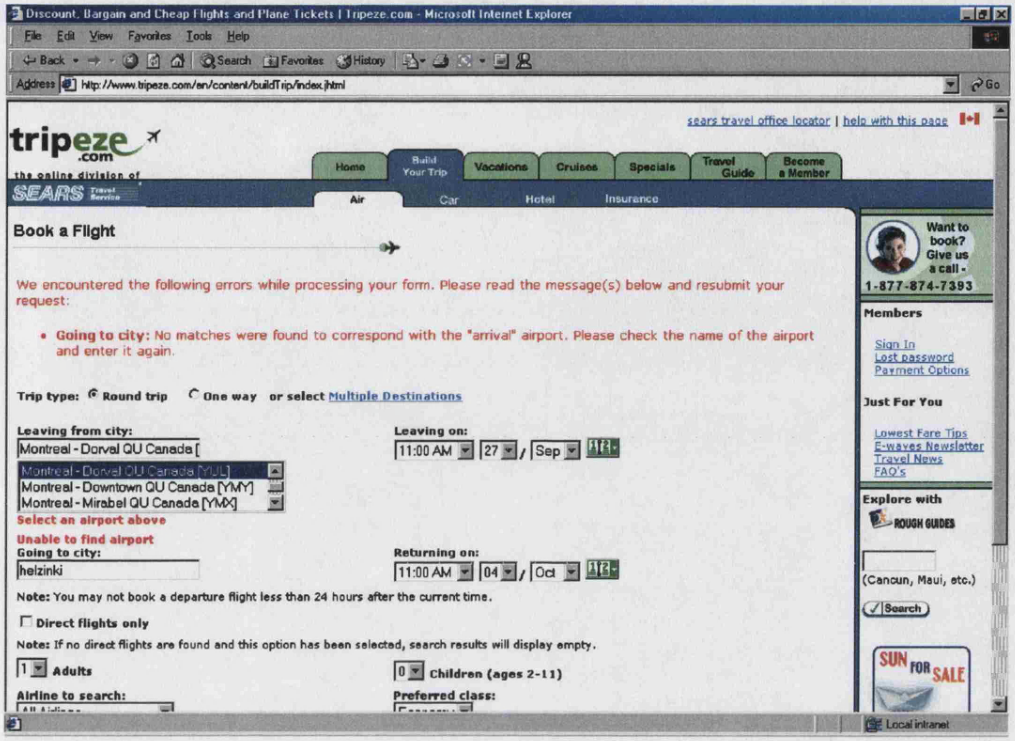


Figure 8.27 Tripeze's inability to recognise proximate terms and typographical errors

Generally, both websites were able to accommodate online shoppers' propensity to experience information overload as general information and search results were presented in a readable and scannable format. In both websites, the most important information such as the ticket price was clearly highlighted and the rest of the flight information was organised into clearly demarcated categories (Figures 8.28 and 8.29).

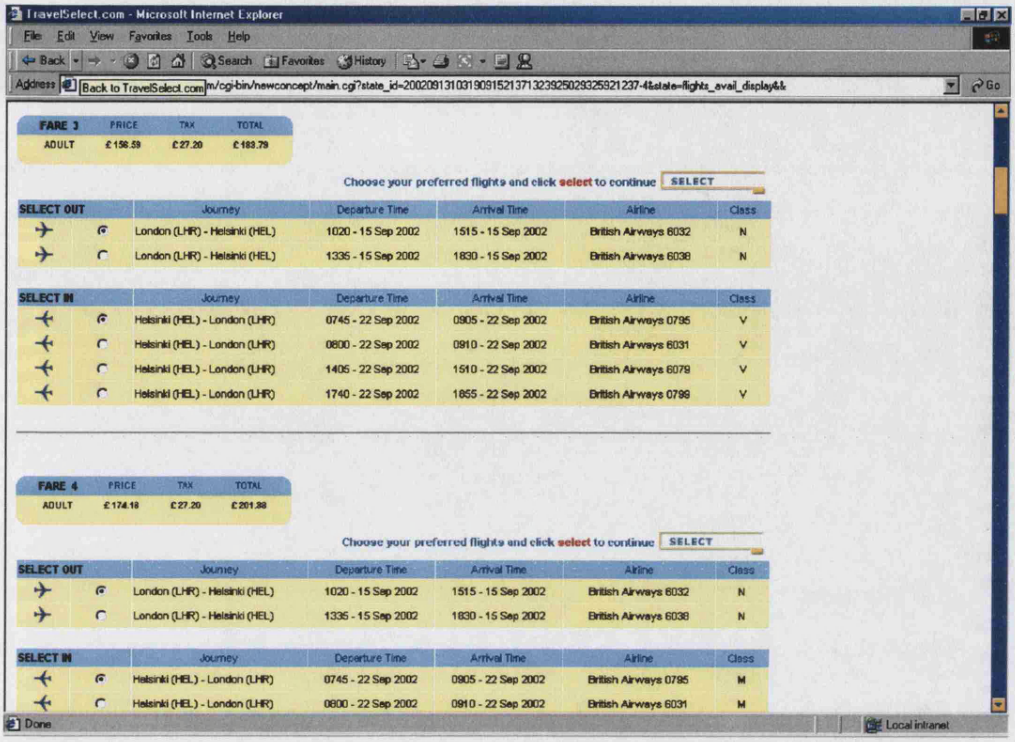


Figure 8.28 Travelselect's well-organised flight information

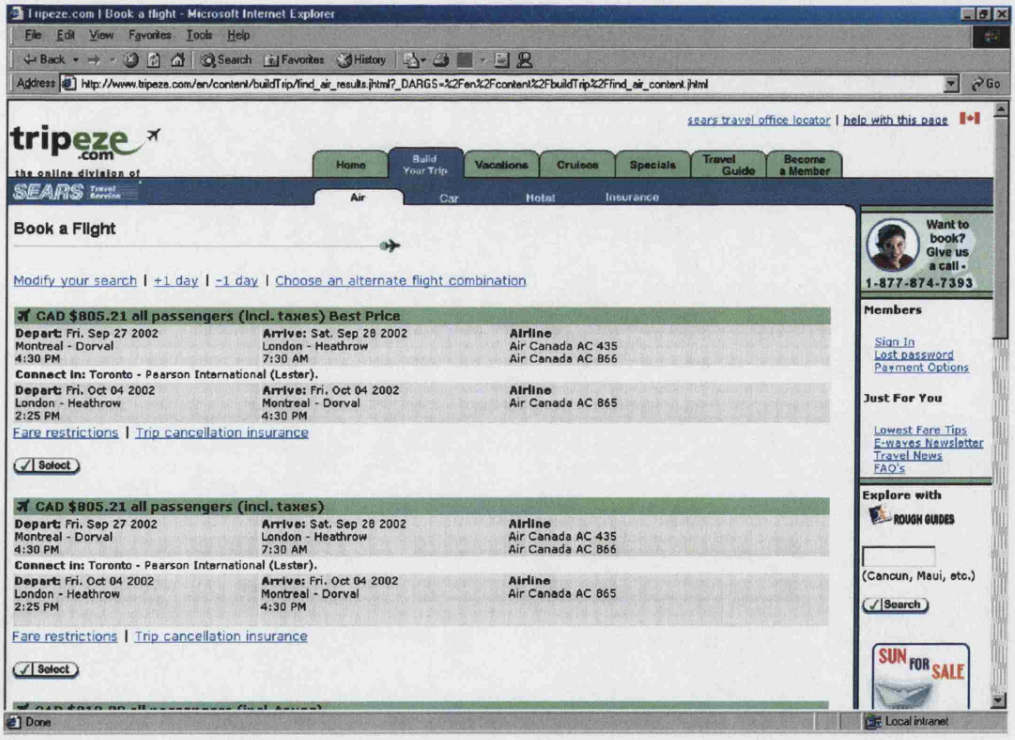


Figure 8.29 Tripeze's well-organised flight information

8.5.2 Decision making

Again, the functionality and professional appearance of both websites were excellent indicators of reliability and would definitely instil trust in shoppers. Contact information was also clearly provided. Above and beyond that, Travelselect had a direct and effective manner of enhancing the shoppers' trust and confidence in them. It stated very clearly in text form its industry affiliations, thus helping to allay potential fears or insecurities:

> *"For Your Peace of Mind & Consumer Protection We Are Members Of*
>
> *ABTA : Ensuring the highest standards of service and quality.*
>
> *ATOL : Protecting you against financial loss once your booking has been made.*
>
> *VERISIGN : Guaranteeing secure credit card transactions."*

Similarly, Tripeze had a reassuring statement regarding security which was written in an accessible and easy to understand manner:

> *"Tripeze uses some of the world's best encryption software to ensure that data stays confidential. Your personal details are scrambled into an unreadable code before travelling on the Web, then de-scrambled by our software at other end. If you're still unsure we'd be happy to help you with your travel plans in any way we can. Feel free to call our Customer Care Centre where our team of travel specialists are standing by to make this go as smooth as possible - and we're always here!"*

It also provided shoppers the option of placing their orders through a customer care representative via phone communications and this possibility of "direct" communications should induce an even greater sense of security in shoppers.

Travel services are impossible to sample online but in this regard, Tripeze was superior to Travelselect because it provided photographs of scenic sites which may give shoppers some impression of these holiday destinations. However, the current online travel industry leader is perhaps Yahoo Travel which has a video gallery of videos on the attractions in various holiday destinations around the world. This is perhaps the closest approximation to travel service sampling available. Given that sampling travel services online is a practical impossibility, online shoppers will be even more interested in obtaining product guidance from other, more experienced

consumers. In this regard, Tripeze performed better than Travelselect but only marginally. While Travelselect had absolutely no facilities for its customers to share travel experiences with one another, Tripeze had a weekly E-Waves newsletter with reports on various destinations and "Cyber Billboard" and "Sound Off" sections for newsletter readers to share travel tips and queries. However, a random reading of five archived newsletters did not contain any contributions from readers. What would have been more effective is a discussion forum for readers to leave comments and travel tips for other readers to access as in the case of the Lonely Planet website. Yahoo also has a "Traveler Reviews" section with reviews by other customers. Such services could help to build customer loyalty as shoppers are likely to find the site's discussion forum a useful resource for travel tips and for communicating with other travellers.

With regard to providing facilities for shoppers to communicate with their significant others, neither website provided facilities for shoppers to email holiday packages to their friends and family as in Yahoo Travel and Expedia. This was a serious oversight given that people usually travel with companions such as their friends and family. Online shoppers would thus appreciate the ability to email travel offers to their significant others for joint consideration and consultation. Both websites were however able to accommodate goal deferment. They saved flight search results in shoppers' "travel cart" and "suitcase" for twenty four hours so that shoppers may mull over their options and perhaps discuss these options with their travel companions.

8.5.3 Consumer-online store interaction

Both Tripeze and Travelselect performed well in terms of utilising shopping scripts in designing their interfaces. After a shopper selects a specific flight, Tripeze prompts the shopper for seat preferences, dietary restrictions, special assistance requests and frequent flyer numbers. Furthermore, it goes one step further to offer "Add a flight/hotel/car/insurance" services, anticipating the shopper's need to arrange for such services once airfare has been sorted out (Figure 8.30). Tripeze's procedures mimic real-life scripts very well in that regard and even surpass real-life scripts because the website is a one-stop shop for all travel-related services. On its part, Travelselect prompts the shopper to check the visa and health requirements for the

specific destination before enabling the shopper to purchase the tickets (Figure 8.31). This is also an example of mimicking real-life scripts.

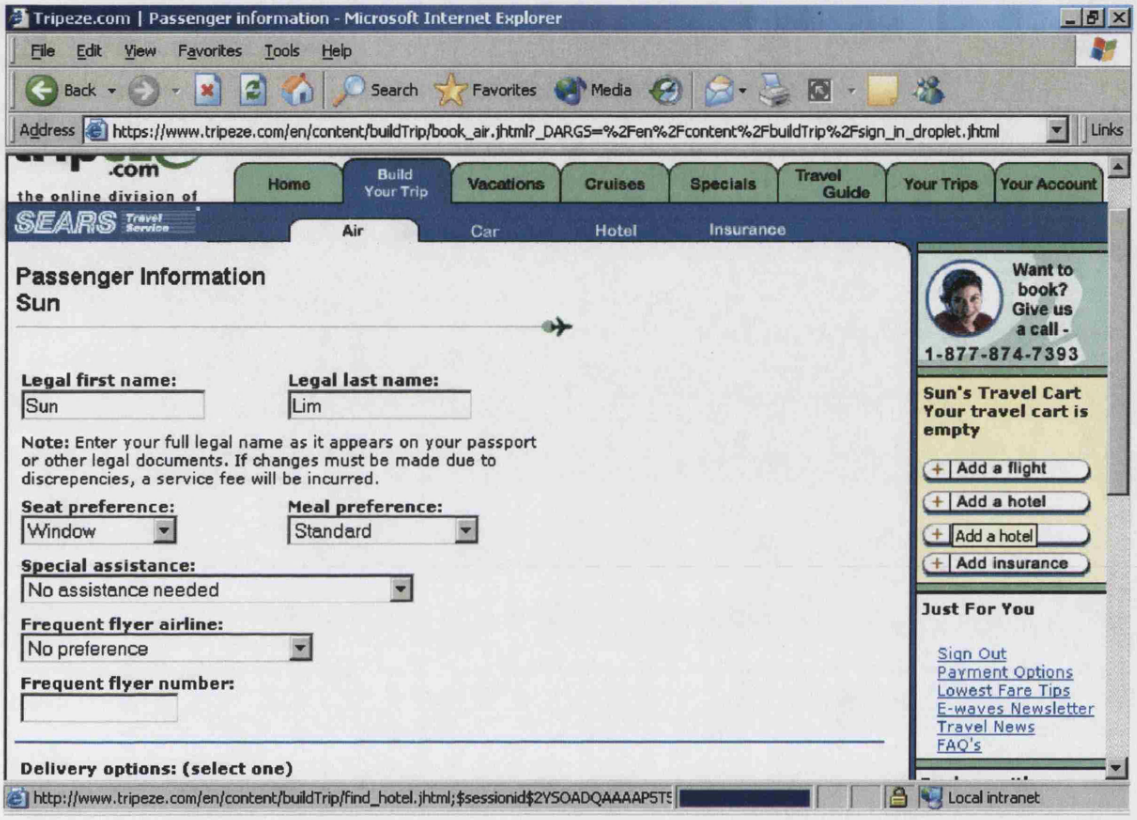


Figure 8.30 Tripeze mimics real-life script by prompting shoppers to make hotel and car reservations

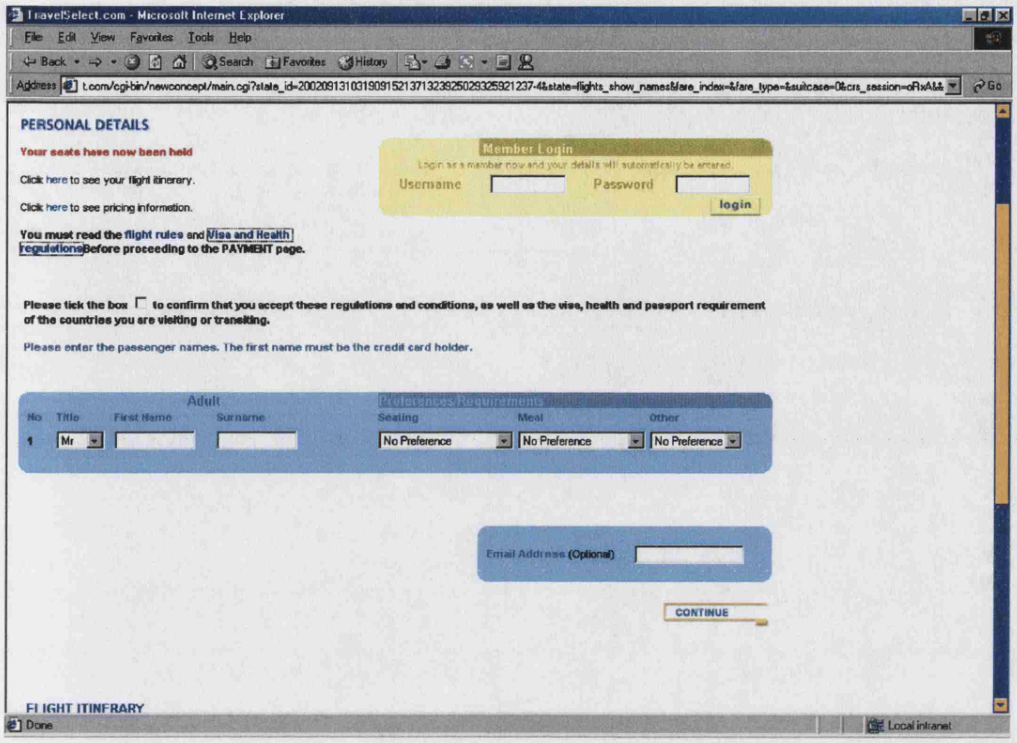


Figure 8.31Travelselect mimics real-life script by providing visa and health regulation information

With regard to their ability to accommodate online shoppers' propensity to multi-task, both websites had useful devices to help keep shoppers abreast of the website's activity. They had special pop-up windows to alert shoppers to the fact that the website was dealing with their search requests and that a relatively longer period of time was needed for these requests to be fulfilled (Figures 8.32 and 8.33). This is particularly useful given that searches for travel-related information take more time to be processed as many companies are involved in providing travel services e.g. airlines, hotels, travel agents.

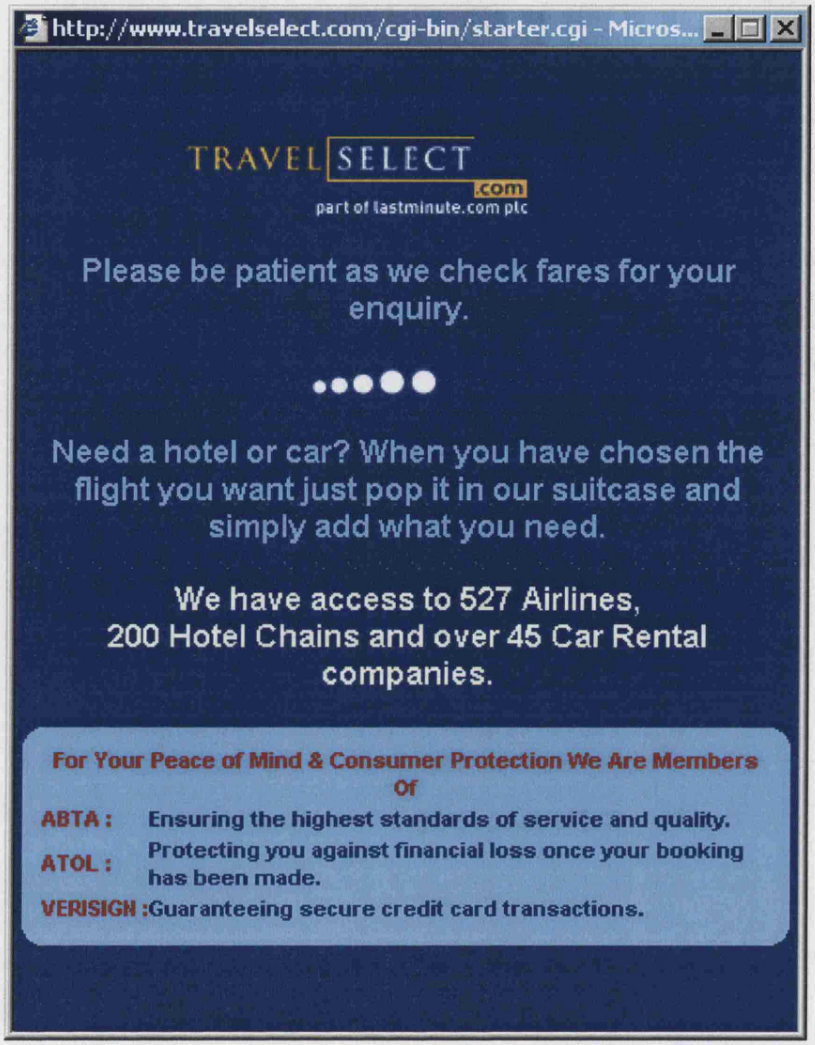


Figure 8.32 Travelselect's pop-up window announcing the long waiting time required for the search

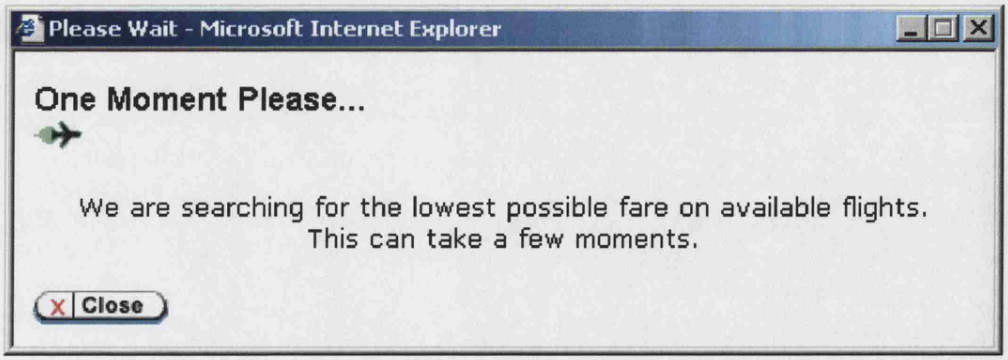


Figure 8.33 Tripeze's pop-up window announcing the long waiting time required for the search

The potential for having an affective response to the websites was greater on Tripeze than on Travelselect. Travelselect adopted a factual manner of presenting travel deals and information on holiday destinations. Tripeze was a study in contrasts. On Tripeze's homepage itself, the descriptions of the many travel packages available were written in a stimulating, exciting and conversational style (Figure 8.34):

> *"When you want to see envy plastered on the faces of your pals just mention you're heading to B.C.'s Cariboo Country to hunker down, say - oh, in just a little spot called the Siwash Lake Ranch. Any wannabe cowpatty worth her ropers knows how exquisite this lavish slice of heaven is!*
>
> *Focus in on the unbeatable travel bargains that are piling up on our site.*
>
> *Early bird bookings, scores of bargains, payment options, cruise deals - one scorcher of a sale!" [Emphasis mine]*

This style of expression is likely to stir reactions in online shoppers and it is aided by the strategic positioning of photographs depicting pleasant holiday venues and bright graphics proclaiming special deals.

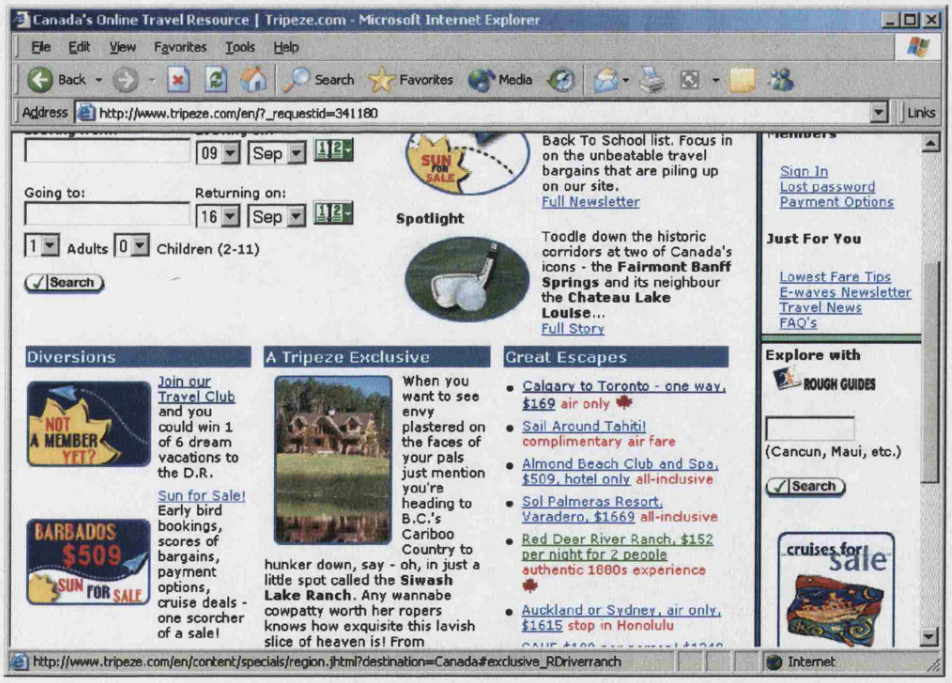


Figure 8.34 Tripeze's promotional offers and stimulating descriptions of travel destinations

The potential for experiencing flow on Tripeze was also high given that the website was extensive, with many links for the shopper to click on and photographs of exotic holiday destinations. The "Travel Guide" section was particularly comprehensive, providing information on 14,000 travel destinations around the world with regard to when and how to travel to these locations, the activities and attractions available, restaurant recommendations and so on. The Travel Guide also had a weekly "Spotlight" featuring a reporter's personal account of a particular holiday destination. Again, the destination was described in an evocative and stirring manner, accompanied by photographs of scenic sites. At the time of the website analysis, a description of a golf course entitled "Unrequited Love at First Link" was featured (Figure 8.35):

> *" She was a real knock-out.*
>
> *And in the face of her ageless beauty I confess to reacting like an adolescent schoolboy – heart racing, face flushed, and legs turning to gooey rubber.*
>
> *Like thousands who came before me, I stood before her paralyzed and helpless, silently hoping not to appear too foolish.*
>
> *So much for a golfer's prayer. I topped my drive!*
>
> *But golf in the Canadian Rockies – in this case Mt. Kidd in the beautiful mountain resort of Kananaskis in southwestern Alberta – is a forgiving sort, and her sculpted face remained politely impassive as I flailed away under her gaze..."*

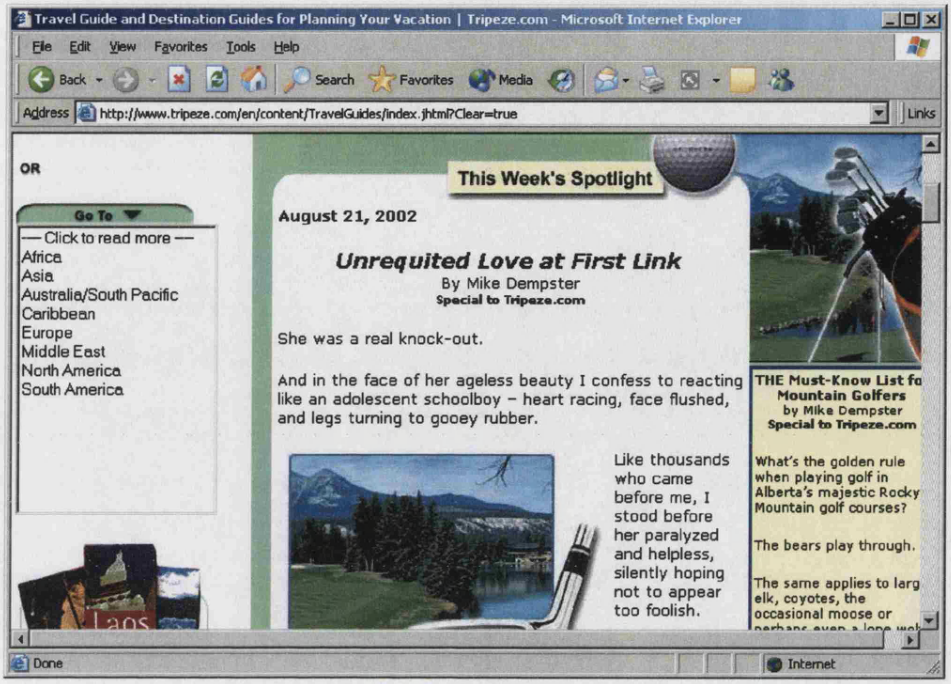


Figure 8.35 Tripeze's evocative and stirring description of a golfing destination

Tripeze also had a "Travel Specials" section with special deals on a variety of destinations (Figure 8.36). Online shoppers can while their time away exploring the different travel deals available. The travel deals were also described in detail, with comprehensive information on airfare and activities associated with each destination. There is therefore some potential for online shoppers to daydream about holidays in these locations and live vicariously through these images. Travelselect was more limited in this regard. While it did have some photographs of scenic sites, these often served as decorations of the website rather than complementing textual descriptions of holiday destinations. It did however have an extensive range of deals and special offers which online shoppers can explore.

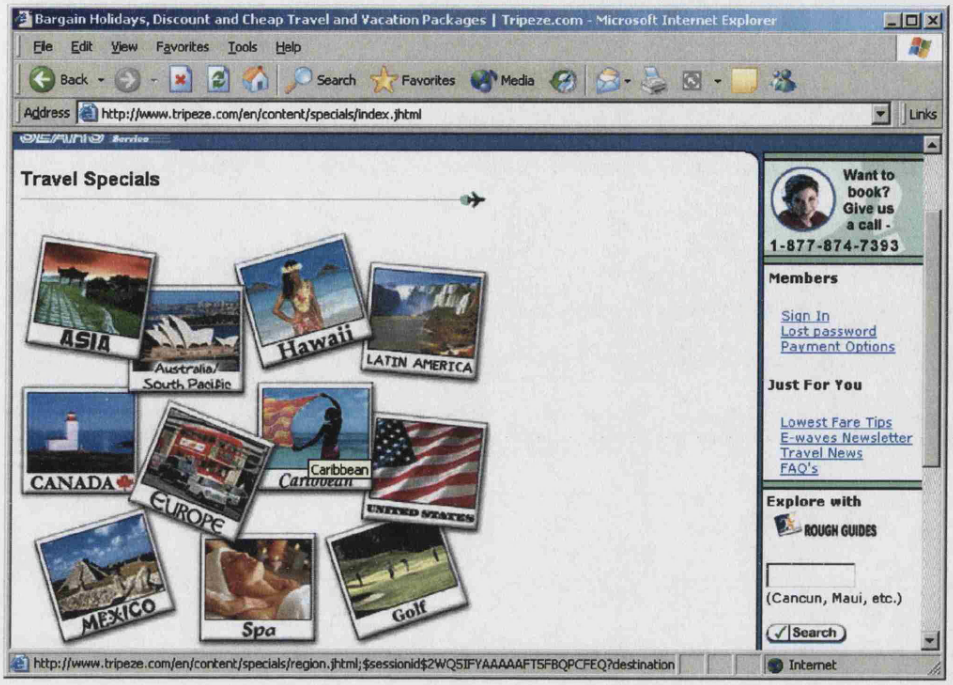


Figure 8.36 Tripeze's "Travel Specials" section with a variety of holiday deals

8.6 APPAREL

The online apparel stores were first short listed through Google using the search strings "'online apparel store' USA", "'online apparel store' UK", "'online apparel store' Canada" and "'online apparel store' Australia". Again, only the first five pages of the search results for each search were utilised. However, these search strings only yielded seven websites. Therefore, another search was conducted using the search strings "'online clothing store' USA", "'online clothing store' UK", "'online clothing store' Canada" and "'online clothing store' Australia". From the combined list of fifteen online apparel stores shortlisted, two were selected – Guess.com (state-oriented) and EddieBauer.com (action-oriented). A comparative analysis of these two online apparel stores follows.

8.6.1 Product search

With regard to accommodating online shoppers' interest to efficiently identify specific products, Guess performed very poorly. It did not offer any search facilities whatsoever. Instead, shoppers are compelled to click on the different sections and sub-sections to select products. On the other hand, EddieBauer was extremely well-planned and well-designed as it had clear product categories and a flexible search

function in which one can search for products by entering either keywords or product item numbers (Figure 8.37).

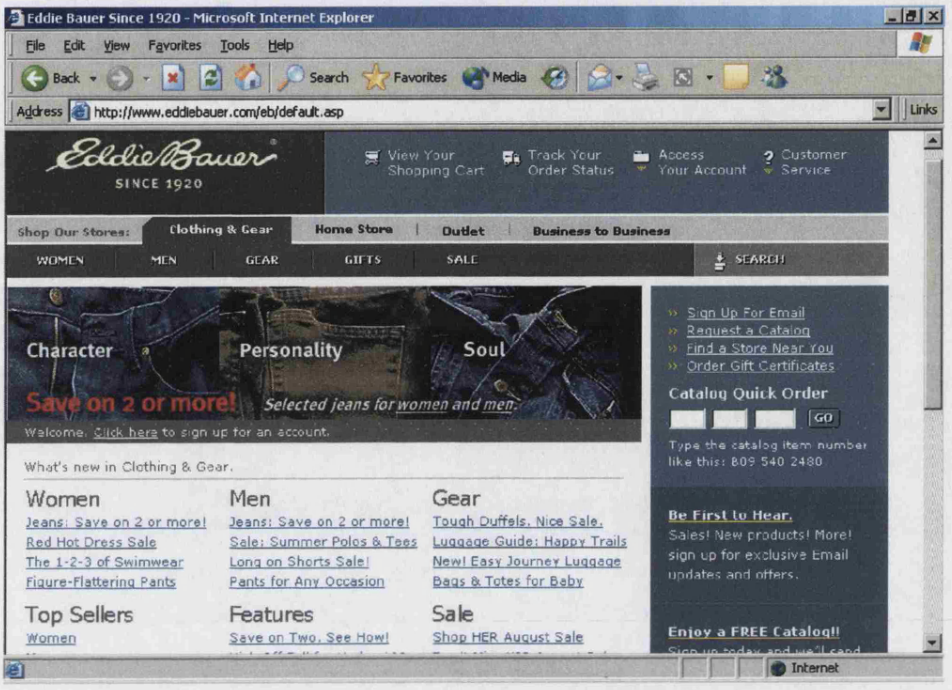


Figure 8.37 EddieBauer's well-designed homepage

A search using the generic search string "shirt" threw up some useful results (Figure 8.38). Eight product images were featured, along with suggestions stating:

"Based on your search, you may be interested in these categories:

- *Men > Polos & T-shirts > Patterned Polos*
- *Women > Shirts > Long-Sleeve*
- *Women > Tees & Tops > Long-Sleeve".*

Such suggestions apprise the shopper of the variety of products available in the store.

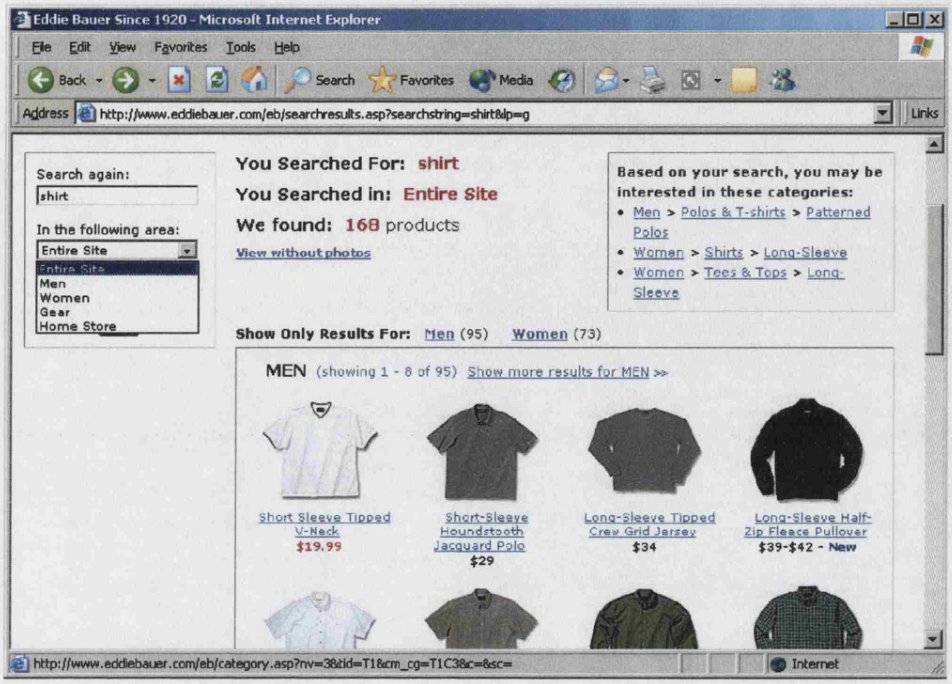


Figure 8.38 EddieBauer's search results for search string "shirt"

The shopper can also choose to repeat the same product search within a specific section of the website, e.g. men, women, gear or home store to identify the product more efficiently. However, what would be of greater help to the shopper would be to offer this option right at the beginning of the search process.

To test the ability of EddieBauer's search engine to accommodate online shoppers' ignorance of appropriate product terminologies, a search for corduroy clothing, deliberate mis-spelt as "cordroy" was made. No products were found but some hints as to how to refine the search were provided (Figure 8.39). This inability to recognise terms of proximate spellings was disappointing in light of the general functionality of the website.

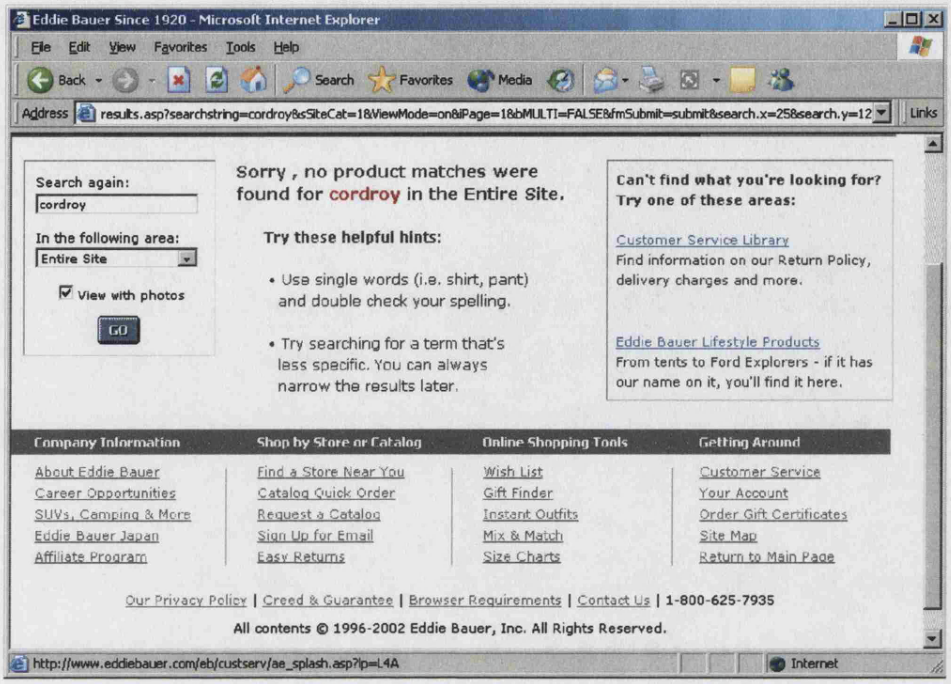


Figure 8.39 EddieBauer's inability to recognise proximate terms and typographical errors

Given the absence of search facilities on Guess, trial searches could not be conducted. Nonetheless, Guess had a particularly useful feature which can accommodate customers' ignorance of specific product terminologies that should be noted here. It provided an instructive "Jean Guide" with annotated photographs to explain the different styles of jeans available, e.g. bootcut and low rider (Figure 8.40). These are somewhat esoteric terms which may not be familiar to the average shopper so the guide is an excellent resource.

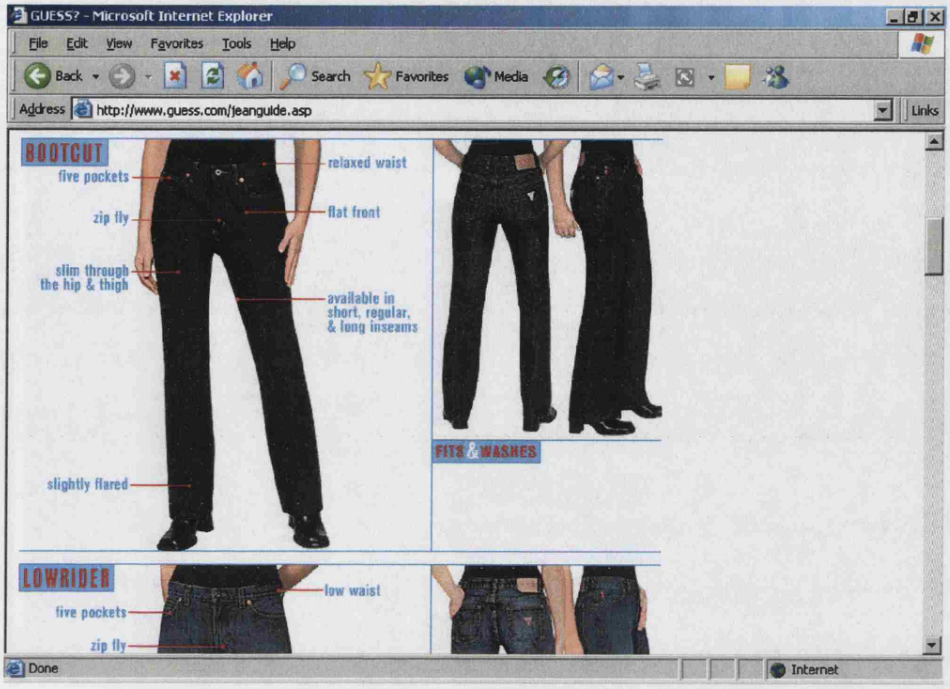


Figure 8.40 Guess' "Jean Guide" on different styles of jeans

Both websites performed rather well with regard to alleviating information overload. Website sections were clearly demarcated and products were listed in a scannable, readable format. Guess displayed information on specific product ranges in a visually appealing and clear manner. Clicking on the product category "Skirts" would launch images of ten skirts appear along with short descriptions (Figure 8.41). This allows the shopper to see at a glance the style, shape and colour of a particular garment, before deciding whether he/she would like to take a closer look at the product by clicking on it. Clicking on the numbers below the images led to more products displayed in a similar manner.

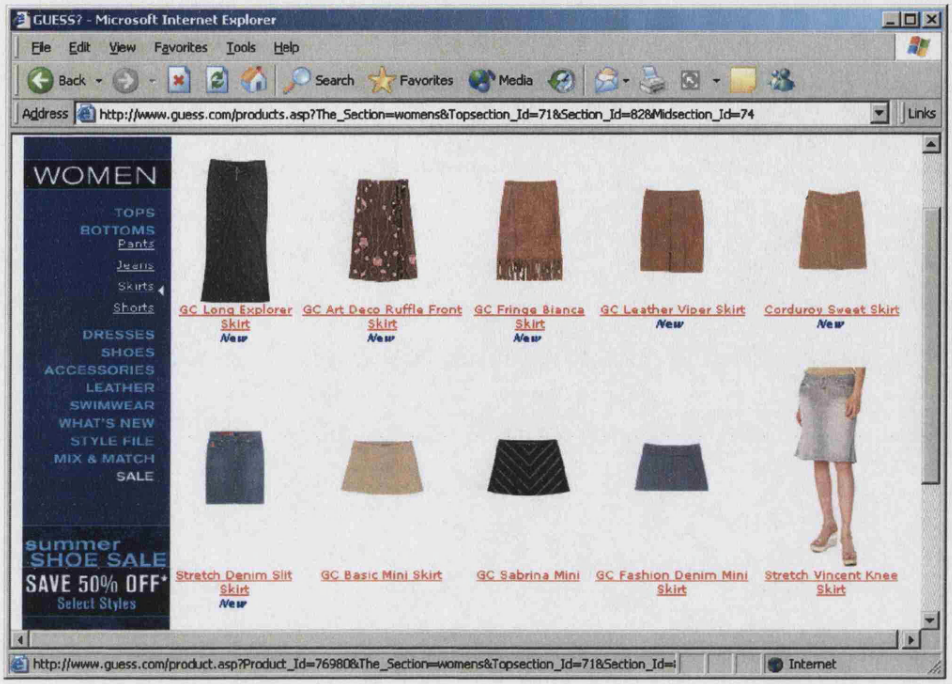


Figure 8.41Guess' visually appealing and clear manner of displaying products

EddieBauer on the other hand listed products by their text descriptions first, offering shoppers the option of viewing the photographs of products by clicking on "view photos" (Figure 8.42). It is likely that this service was introduced to aid shoppers with dial-up Internet connections which load images at a slower rate. Overall, EddieBauer had a much larger range of products than Guess and therefore faced a much greater challenge in terms of displaying copious amounts of product information in a manner which eases information overload. Nonetheless, EddieBauer performed rather well as product information was scannable, readable, and hierarchically organised.

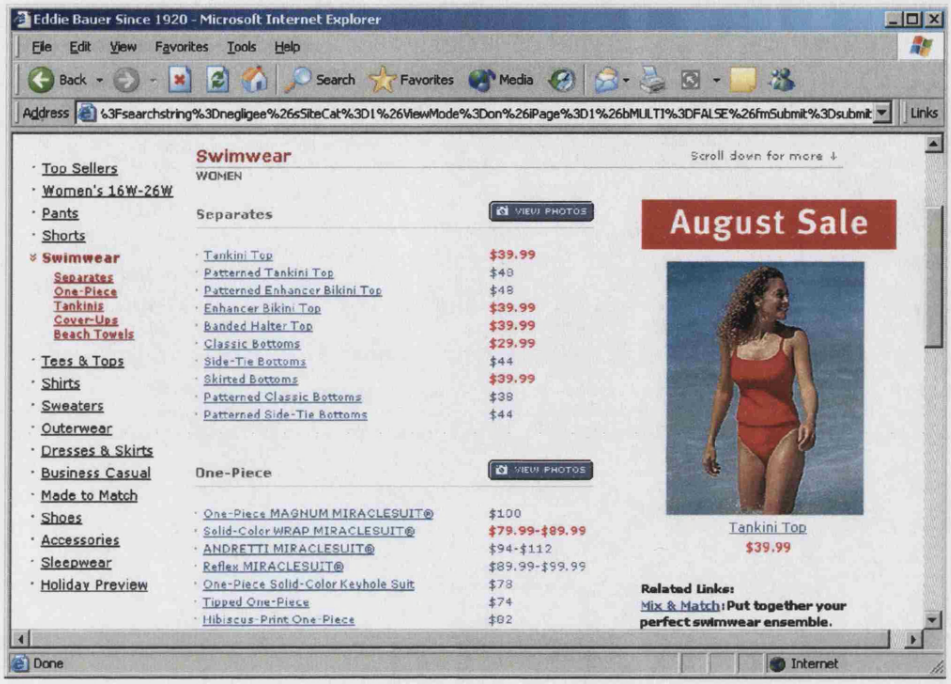


Figure 8.42 EddieBauer's textual display of products

8.6.2 Decision making

Both websites' professional and slick appearance, ease of navigation and smoothness of operation conveyed a greater sense of trust and reliability than any control trust indicators could have done. Indeed, control trust indicators such as Verisign seals were markedly absent from both websites. Instead, there was a general atmosphere of transparency to both websites as essential information on making a purchase, tracking orders, shipping, tax and contacting the store were clearly provided. Both websites provided details on their email help services and twenty-four hour toll-free hotlines. However, EddieBauer performed slightly better as it also provided an "Ask Eddie Instant Help" interactive online system for answering questions not answered by the FAQs.

With regard to enabling shoppers to sample products, both Guess and EddieBauer were thorough and comprehensive in their product descriptions. Given that clothing is an experience good, both websites appeared mindful of the need to provide extensive information on fabric, cut, measurements, colour and cleaning instructions for each piece of clothing. EddieBauer also had a special "Women's Pant Advisor" section which provided guidance on which pant styles flatter which body

shapes (Figure 8.43). Such value-added information is extremely useful given that online shoppers are unable to try on the clothes physically.

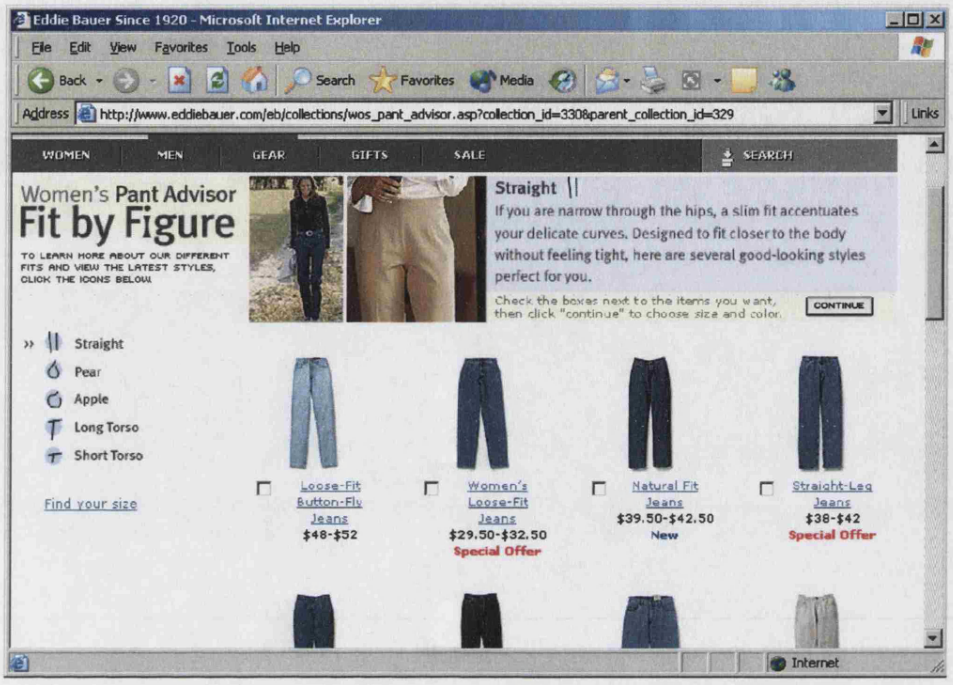


Figure 8.43 EddieBauer's "Pant Advisor" with guidance on styles which flatter different body-shapes

Both websites also provided mix and match services for "sampling" products by allowing shoppers to pair tops with bottoms and in the case of EddieBauer, with shoes as well. However, this mix and match service is vastly inferior to that of Lands End's "My Virtual Model" service which allows you to have a digital model of yourself to "try on" clothes (Figure 8.44). Shoppers can specify the body shape, height, weight, hairstyle and facial features of their virtual models to resemble themselves. Lands End's service is perhaps the closest approximation which online shoppers have to physically trying on clothing in brick-and-mortar stores.

Figure 8.44 Lands End's "My Virtual Model" service for "trying on" clothes

Neither website provides product guidance from other consumers in the form of customer reviews, testimonials or customer chat rooms. The closest approximation to such services was EddieBauer's special classification of its top selling items for each product category. However, that is merely a crude product classification which fails to elaborate on why customers favour these particular products. At the same time, neither website was able to accommodate customers' interest in communicating with their family and friends about specific products and potential purchases. Guess's postcard service only allowed its shoppers to share a limited number of images with other people. It did not offer a service where you could email images of specific products to your friends in order to obtain a second opinion. EddieBauer was also deficient in this respect.

8.6.3 Consumer-online store interaction

Both websites' '"Mix and Match" services are excellent examples of adhering to a real-life script as shoppers in brick-and-mortar stores tend to mix and match clothing as well. EddieBauer's mix and match service (Figure 8.45) was superior to that of Guess (Figure 8.46) and possibly to brick-and-mortar store shopping as it

enables shoppers to mix and match clothing as well as footwear – a rare possibility in medium to large-scale apparel shops and department stores as footwear and clothing are usually located in different sections. What was however disappointing about both websites' mix and match service was that neither website provided an image of how the entire ensemble of clothes would look as a complete outfit worn by a person (Figures 8.45 and 8.46). Instead the composite pieces of clothing appeared separately on both websites and not adorned on models.

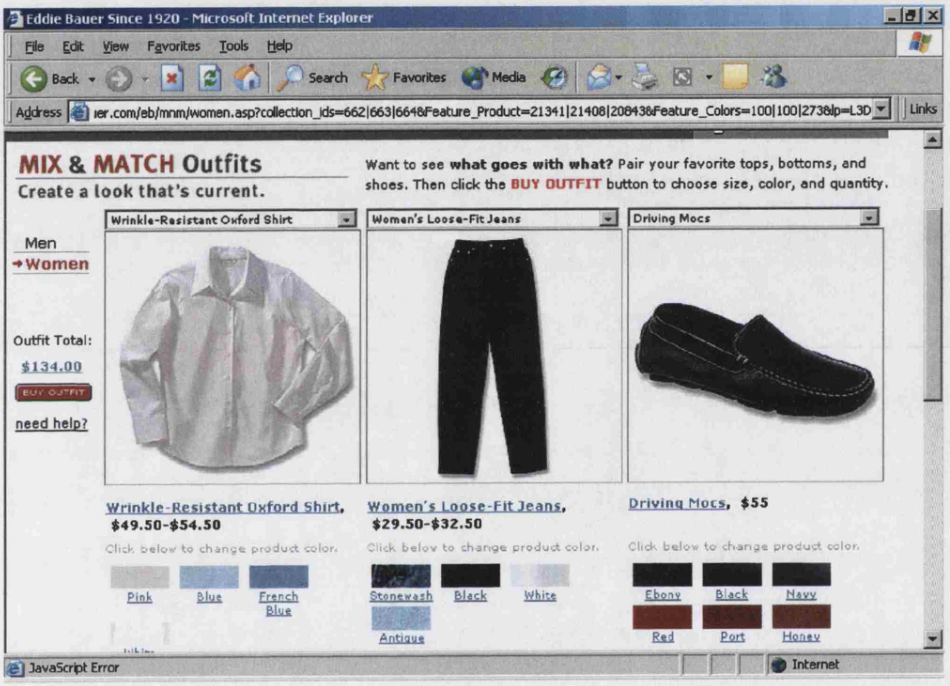


Figure 8.45 EddieBauer's "mix & match" service

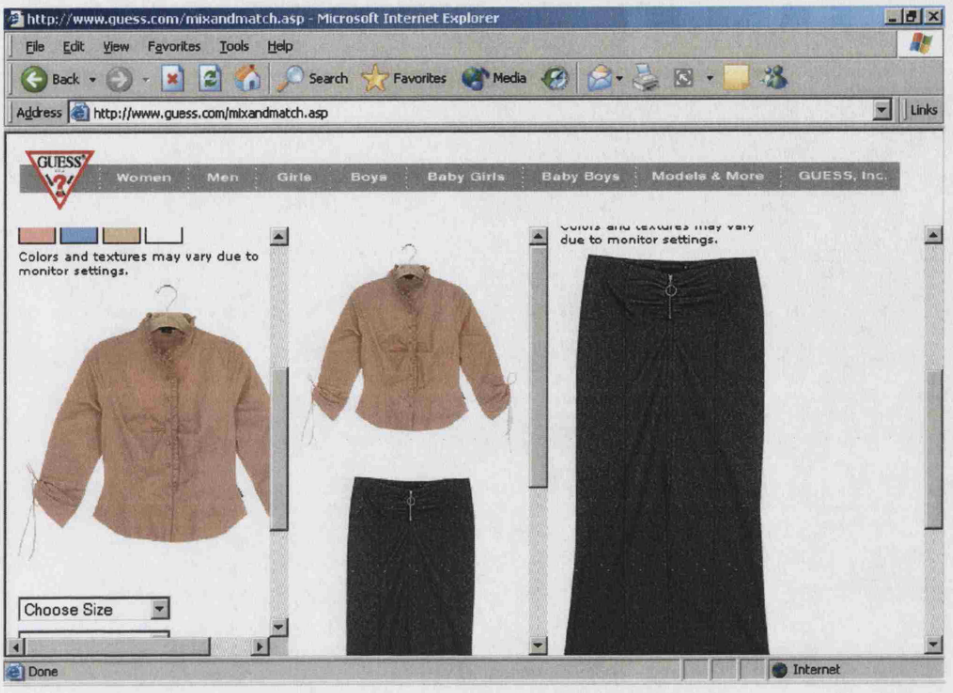


Figure 8.46 Guess' "mix and match" service

On the ability to accommodate online shoppers' propensity to multi-task, EddieBauer performed better than Guess. This is because EddieBauer's interface stated very clearly the different stages involved in an online transaction. A special box lists numerically the product, colour, size and quantity selections which have to be made before a product can be added to one's shopping cart. Breadcrumb navigation links, e.g. "Men > Top Sellers>" were provided for shoppers to get "their bearings" within the online store. No such navigational aids were provided on Guess. Nonetheless, both websites made it extremely easy for shoppers to return to their respective homepages by prominently placing their company mastheads (which linked to their homepages) on each and every page.

The potential for shoppers to have an affective response on EddieBauer was rather low. Although the site was generally well-designed and had a clean, uncluttered feel about it, clothes and accessories were often featured by themselves rather than being worn by models. These images conveyed the style and quality of the clothing but did not evoke any associations of people who wear EddieBauer clothing and the sorts of lifestyles they lead. The images which did feature models also deemphasised the models and emphasised the clothing as the models' faces were often omitted

(Figure 8.47). Furthermore, a variety of different models were used rather than a stable of familiar faces which shoppers can grow accustomed to. Also, EddieBauer did not communicate with its customers in an intimate or friendly fashion. Its products and special sales were referred to in a matter-of-fact way and human spokespersons, buying clubs and online communities were also absent.

Figure 8.47 EddieBauer's emphasis on clothing with models' faces omitted

In contrast, the potential for having an affective response was extremely high in Guess. At the time of the website analysis, Guess was staging a "Model Search 2002" competition and requested that online shoppers vote for models in Men, Women, Boy and Girl categories with the exhortation – "Here's your chance to check out the competition and pick your favourites" (Figure 8.48). This exercise gives Guess's online shoppers a "stake" in the store as their votes help to determine which models front Guess's advertising campaigns. At the same time, it also promotes repeat visits to the store as shoppers would be interested in the eventual outcome of the competition.

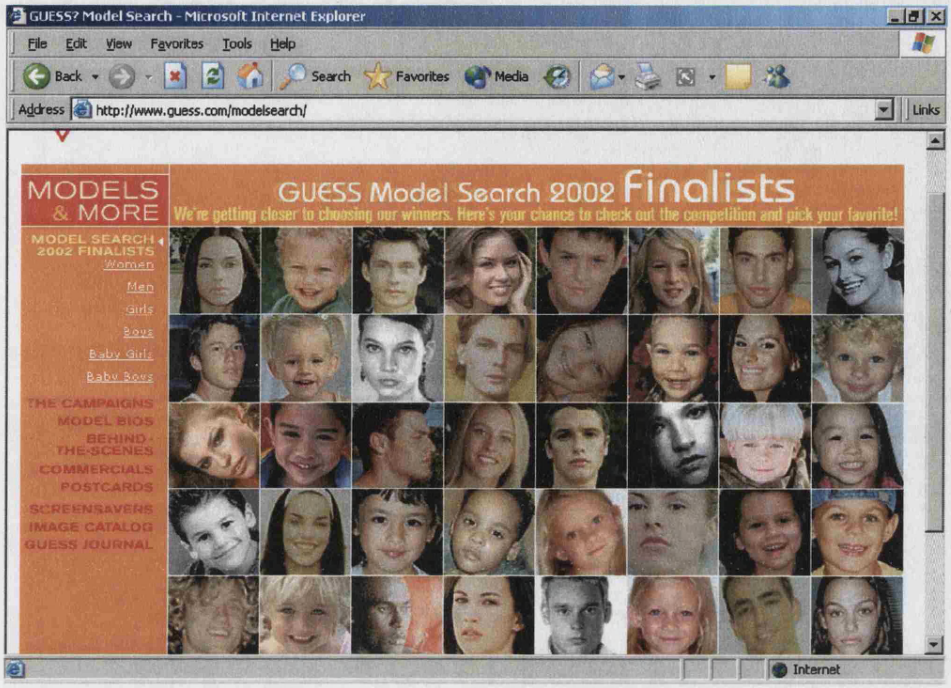


Figure 8.48 Guess' "Model Search 2002" which invites shoppers to vote for their favourite models

Guess also had several features which may be able to promote parasocial relationships between the store's models and its shoppers. Extensive biographies of the models were provided along with interview questions and answers. The biographies presented the models as regular teenagers, thereby encouraging Guess' younger shoppers to identify with them:

> *"Despite her growing success, Megan remains committed to her education. She once turned down a shoot for Vogue because she had a school final. With the help of a private tutor when she's on location, Megan still attends high school. She enjoys basketball and runs on the varsity track team. Someday, Megan would like to attend college and pursue a career in interior design."*

Also, Guess often referred to its models by their first names only and provided behind-the-scenes glimpses of the fashion photo shoots. These behind-the-scenes, "*What goes on before the camera clicks*" glimpses captured the models in relaxed, joyful and "natural" poses, thereby humanising them and enhancing the potential for affect and affiliation in its shoppers (Figure 8.49). This "feel good" factor was underlined by the photo caption which stated "*...at our campaign shoots, everyone always has a good time*". Shoppers who want even more exposure to these models

can view video commercials, download screensavers and images from the Image Catalog and Guess Journal, all of which feature these models. The Image Catalog contains ninety-two images while the Guess Journal contains fifty-two images. Shoppers can also share images of these models with their friends as Guess provides a postcard service.

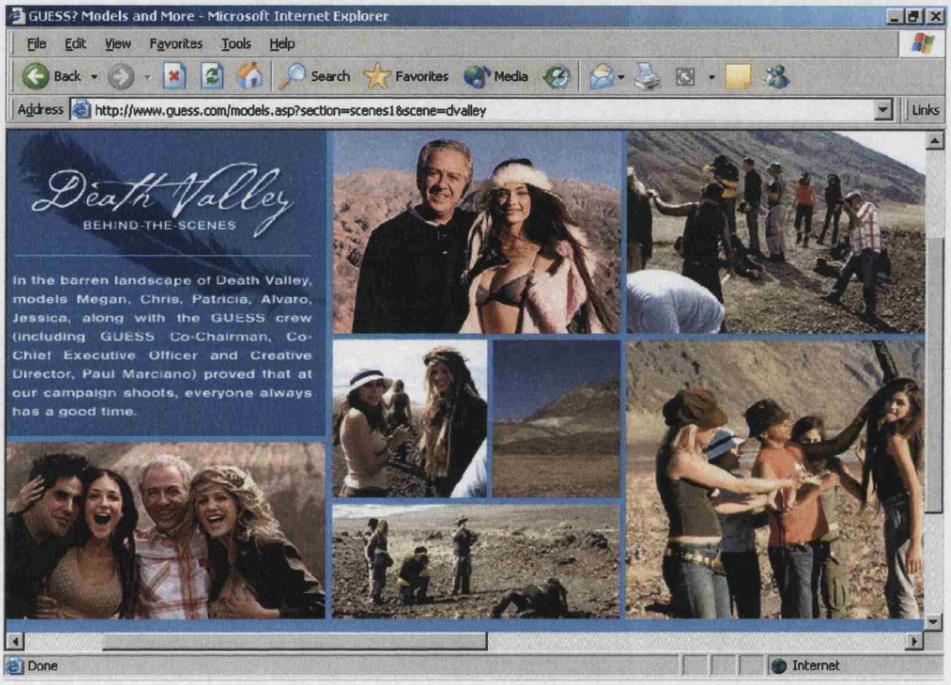


Figure 8.49 Guess models in relaxed, joyful and "natural" poses

With regard to flow experience, there was some potential for experiencing flow on EddieBauer simply because the store offered a large range of products and product categories which shoppers can click on and explore. However, this also translates into the large number of products being listed in text form as that is the most efficient means of presentation. Where product images did appear, products often appeared on their own rather than being modelled by someone. As a result, these images were not particularly evocative. Therefore, the potential for shoppers to experience flow was much greater in Guess. This is due to the presence of features such as video commercials with audio soundtracks, the extensive range of images, screensavers and postcards and the interactive "Mix and Match" service. Shoppers

will be able to while away their time clicking on one image after another. The images of the models were also set in exotic and beautiful locations such as Death Valley, California, Santa Fe, New Mexico and Wailea, Hawaii. The descriptions of the photo shoots were also suggestive and arousing (Figure 8.50):

> *"There were no distractions. No cell phones, no e-mail, no hustle and bustle of the big city. The one and only thing on their agenda: relaxation. Early evening luaus, stolen moments in the shade, cooling off in crystal waters, and strolls through the rainforest consumed their days. The tropics of Hawaii brought out the sensuality in everyone."*

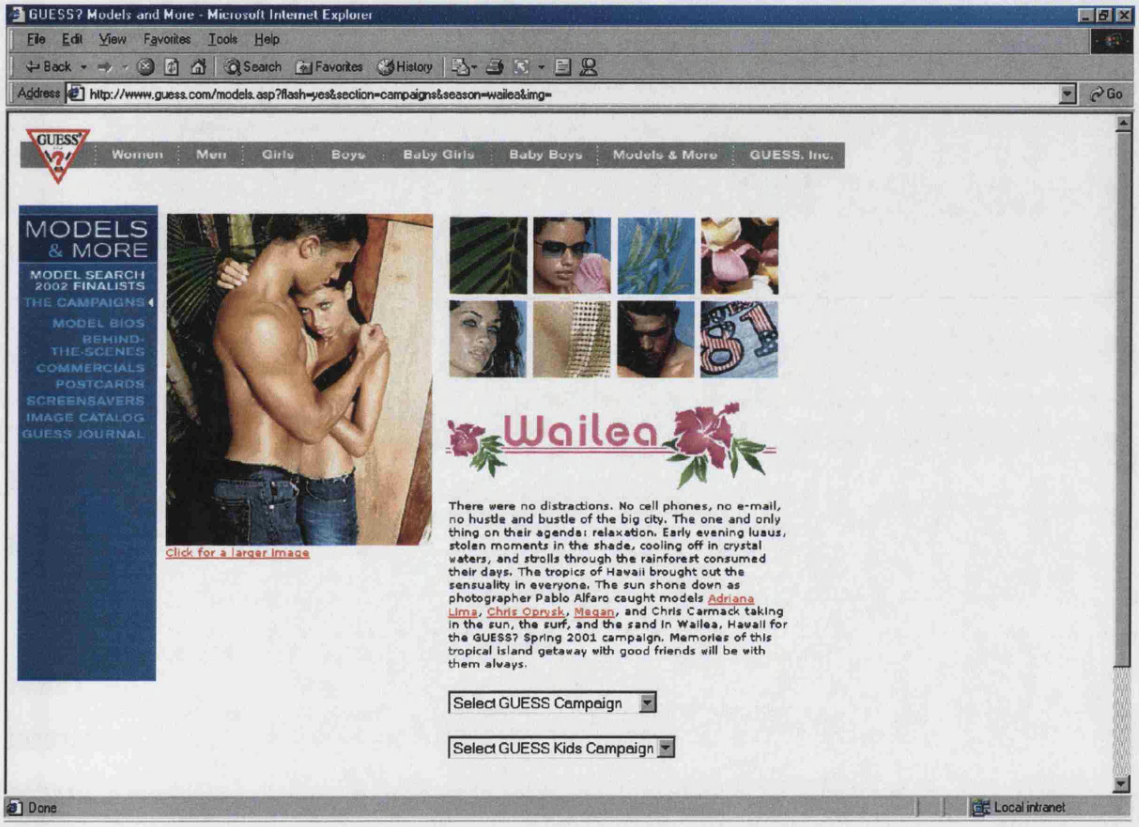


Figure 8.50 Evocative descriptions and photographs of Guess' models in exotic locations

The video commercials also featured the models leading glamorous, jet-setting and sensual lifestyles (Figure 8.51). For example, the video entitled "Paparazzi" features a stylishly-dressed couple being whisked from the airport to a posh boutique to the theatre and then to a chic party, being besieged by paparazzi throughout. The video was also accompanied by an evocative soundtrack. These videos and images have the potential to induce flow and stimulate daydreaming in shoppers who may live vicariously through the models. The interactive "Mix and Match" service also

allows shoppers to "try on" one set of clothing after another and this may also help to induce the flow state.

Figure 8.51 Guess commercials depicting people in glamorous and sensual circumstances

8.7 DISCUSSION OF FINDINGS

The above analysis shows that assessing website usability according to their ability to accommodate the typical behavioural traits of online shoppers produces instructive findings. These findings have both marketing and social implications. The behavioural traits suggested here can therefore serve as value-added website usability criteria which can be used in conjunction with the basic usability metrics for websites i.e. the minimum components which retail websites should have in order for online shoppers to perform their tasks. The implications of the findings are discussed as follows.

8.7.1 Marketing implications

The findings of this study have marketing implications for online stores which are interested in increasing their sales and improving customer relationship management. Specifically, the findings can be used by online stores to (i) enhance the functionality of store interfaces, (ii) instil trust in customers, (iii) improve the online shopping

experience for customers (iv) satisfy customers' communication needs and (v) foster store loyalty in customers.

8.7.1.1 Enhance the functionality of online store interfaces

To enhance the functionality of online store interfaces, online stores should strive to accommodate several behavioural traits of online shoppers – their need to identify products efficiently, their ignorance of appropriate terminologies, their propensity to experience information overload and their potential for goal deferment.

The more efficiently and conveniently online shoppers are able to locate products and services online, the more likely online shopping will be a preferred shopping option. Overall, as seen in the action-oriented websites such as Bookzone, CDConnection, Travelselect and EddieBauer, locating search engines prominently will help to fulfil online shoppers' needs for expeditious product identification. In the state-oriented websites, search engines tended to be obscured by bodies of text and numerous graphics. The provision of multiple-criteria search engines will also expedite product searches. Such facilities were provided in MyMusic, Travelselect and Tripeze. More importantly, websites must be able to accommodate consumers' ignorance of appropriate product terminologies by making their search engines more intuitive, so as to recognise proximate terms and detect typographical errors. In this regard, the action-oriented sites Bookzone, CDConnection and Travelselect performed well. These intuitive search engines were extremely useful as they enabled searches to be performed successfully even though the wrong terminology was used. Another means of accommodating consumers' ignorance of appropriate product terminologies is to provide "search help" guidelines on how to refine searches for greater success. Such facilities, as provided by Bookzone, BooksAMillion and MyMusic, will help to educate online shoppers on the right terms to use and help to stem frustration as well.

The ability to alleviate information overload in shoppers is also a determinant of a retail website's functionality. Generally, information overload was averted on most of the websites studied through clear and consistent layout and the use of scannable text. However, information overload was still a problem in state-oriented websites given the

many disparate bodies of information and promotional offers crammed into many webpages. A variety of useful practices which help to alleviate information overload were also employed. These included highlighting the most important information, e.g. Tripeze and Travelselect; classifying search results into broad categories, e.g. MyMusic; and providing sorting facilities for shoppers to organise search results according to their preferences, e.g. BooksAMillion.

While the pressure to decide on a purchase while in a brick-and-mortar store is rather strong, the ability of saving one's product considerations in wishlists or shopping baskets in online stores for more prolonged deliberation is a boon to consumers. Therefore, the provision of such facilities, as exemplified by BooksAMillion, Tripeze and Travelselect, will accommodate shoppers' tendency for goal deferment.

8.7.1.2 Instil trust in customers

To instil trust in customers, it is critical for websites to have indicators of trust and reliability. In a situation where consumers can only rely on information in the website to make purchase decisions, websites should endeavour to accommodate customers' need to sample products online to enhance their trust in the retailer.

All of the websites analysed had a general air of transparency. Essential information on making a purchase, tracking orders, shipping, tax and contacting the stores were all clearly provided, e.g. EddieBauer and Guess. Their interfaces looked professional, functioned well and reminders were made to assure shoppers that the communication of payment details was secure, e.g. Bookzone, BooksAMillion and Tripeze. Worthy of note is MyMusic's "Testimonials" section featuring positive comments from satisfied shoppers, which is also an excellent indicator of trust and reliability. Travelselect's approach of highlighting its industry affiliations can also help to allay insecurities.

The ability to sample products online will help to increase online shoppers' trust in retailers. In this regard, while many of the stores analysed provided some semblance of product sampling facilities, e.g. sample tracks on CDConnection and MyMusic, mix and match services on Guess and EddieBauer, none of the stores analysed had exemplary

product sampling facilities. Instead, Amazon's "look inside" service for books, customisable LandsEnd's Virtual Model for clothes and Yahoo Travel's videos of holiday locations have set the standards for online stores in their respective product and service categories.

8.7.1.3 Improve the online shopping experience

To improve the online shopping experience for online shoppers, retail websites should seek to accommodate online shoppers' tendency to utilise scripts and their propensity to multi-task. In so doing, retail websites will be able to make the whole process of online shopping more compatible with consumers' shopping habits and therefore make online shopping more intuitive.

Action-oriented and state-oriented websites performed equally well (or equally poorly) with regard to adherence to scripts and their tendency to utilise scripts in their interface design. Travelselect's and Tripeze's adherence to real-life scripts, e.g. checking visa requirements before booking flights and making hotel and car reservations after booking flights were excellent examples of how mimicking real-life scripts in online stores can heighten website usability and improve online store's services to customers. EddieBauer's and Guess's mix and match services also mimicked the real-life script of matching different tops and bottoms when shopping for apparel in brick-and-mortar stores.

Most of the websites were able to accommodate consumers' tendency to multi-task. They introduced many features which help shoppers to keep abreast of on-screen developments even if they interrupt their online shopping with other activities. These included the provision of breadcrumb navigation links, e.g. BooksAMillion and EddieBauer and "return to homepage" buttons e.g. Bookzone, MyMusic and Guess. In particular, Travelselect and Tripeze's special pop-up windows warning shoppers of a long wait are also useful for multi-tasking shoppers.

8.7.1.4 Satisfy customers' communication needs

Satisfying online shoppers' communication needs requires the provision of product guidance from other consumers and setting up facilities for customers to communicate with their significant others. Generally, most of the stores did not provide any avenues for product guidance from other consumers in the forms of customer reviews and customer chatrooms and discussion groups. Those websites which did provide some semblance of product guidance from other consumers performed poorly. For example, CDConnection's and MyMusic's customer ratings of CDs were merely quantitative and the rating process was not clearly explained. There were no reviews written by other customers who had already bought and heard the CDs. Similarly, Tripeze merely claimed an interest in soliciting customer feedback for public dissemination but no such feedback was found on the site. It is in online shopping that consumers require even more product guidance from other consumers since they are unable to assess in person the quality of the products or the veracity of the store. Therefore, retail websites should make extra efforts to provide such guidance so as to instil greater confidence and trust in online shoppers.

Across the board, none of the websites analysed had made any concerted effort towards accommodating online shoppers' interest in communicating with their significant others. This is a glaring oversight on the part of these retail websites. Online shoppers would appreciate the opportunity to recommend products to their friends and family and to consult their loved ones either for a second opinion or in cases of joint decision-making such as on family holidays or on household purchases. While shoppers can indeed perform all of the preceding activities by copying and pasting hyperlinks onto email messages, online shoppers would find it more seamless and convenient if they could email their friends directly from the retail websites. Retail websites which are able to accommodate this need are likely to benefit from increased sales as awareness of their stores and products will be heightened by such word-of-mouth promotions, otherwise known as "viral marketing" (LaRose 2001). Some websites which are already offering "Email this product to a friend" services include CrateandBarrel.com and Bluefly.com.

8.7.1.5 Foster store loyalty

Fostering store loyalty amongst customers can be achieved through taking into account customers' potential for affective response to websites and their potential for flow experience. Generally, the state-oriented websites had greater potential for stimulating affective responses in online shoppers. Retail websites which adopt strategies that encourage online shoppers to develop social and para-social relationships with the stores and with other customers are likely to benefit from increased store loyalty. BooksAmillion's use of the Club Editor's image, the introduction of all of MyMusic's staffers by name and the Guess model search contest as well as the behind-the-scenes pictures and descriptions of Guess models all helped to humanise these stores and enhanced the potential for their customers to develop an affiliation with these store spokespersons. This affiliation may then develop into store loyalty and repeat visits to these stores.

The potential for flow experience was generally greater in the state-oriented websites which contained more audio-visual stimuli in the form of graphics, images and promotional offers, e.g. Guess, BooksAMillion and Tripeze. In particular, Guess had the widest range of audio-visual stimuli as it offered a variety of photographs and videos with evocative soundtracks for online shoppers' viewing pleasure. However, action-oriented websites which contained many links, sections and webpages also had potential for inducing flow because shoppers had many avenues for exploration, e.g. EddieBauer and Travelselect. In sum, retail websites which offer both diversity in audio-visual stimuli and depth in website content have the greatest potential for inducing flow in online shoppers. Online shoppers who experience flow tend to have more enjoyable shopping experiences and make repeat visits to stores, and this may consequently translate into store loyalty.

8.7.2 Social implications

As can be seen from the findings, retail websites are getting more sophisticated in their design. Online retailers realise that they need to circumvent the facelessness of their online stores through introducing buying clubs and human spokespersons for positive affiliation and affect with consumers. These may encourage the development of

parasocial relationships between online shoppers and spokespersons of online stores. Research has suggested that parasocial relations between the viewers and salespeople of television home shopping channels may encourage impulse purchases by viewers (Stephens, Hill et al. 1996) The exploitation of these parasocial relationships by online stores to increase sales could be a cause for concern. Unhealthy parasocial relations between online shoppers and spokespersons of online stores or with other customers in customer chat rooms could also be a new social phenomenon that needs greater attention.

Concerns have also been raised about the fact that impulse buying will increase with the advent of online shopping (LaRose 2001). Recent evidence of the emergence of recreational online shopping (Li and Russell 2000) and the existence of "eBay addicts" (Greenfield 1999) fuel these concerns. Studies of conventional shopping in American consumers also give cause for worry. Ninety percent of all consumers make impulse buys (Cobb and Hoyer 1986) of which two-fifths of these consumers regard themselves as impulse buyers (Rook and Fisher 1995). The likelihood of impulse buying increasing with the advent of online shopping is high since online stores never close. This is exacerbated by facilities which store online shoppers' credit card and delivery information online to expedite their product purchases, e.g. Amazon's "One-Click" and BooksAMillion's "Fast Track" services. As seen in Part II of the thesis, such services may increase the likelihood of shoppers making impulse purchases as they have less time to deliberate and consider. However, some other online shopping services may actually help to avert impulse buys. The save shopping basket and wishlist features enable shoppers to store their product considerations and mull over them rather than make hasty decisions. Therefore, more research needs to be conducted on which features of retail websites promote or prevent impulse buys (building on the study by LaRose) so that online shopping does not create a new social ill.

8.8 Limitations Of Existing Study and Directions For Future research

This study had several limitations which can be addressed in future research. It is essentially an exploratory, qualitative study so the results are not generalisable across the retail websites in general. Another limitation of this study is that it does not identify the relative importance of the different usability criteria. This will be an interesting angle for

future research – to establish which features are more important for different product genres. A quantitative study of consumer assessments of websites of different retail sectors can be conducted to study how the different usability criteria vary in importance for specific retail sectors. This study can take the form of usability surveys amongst online shoppers of these different retail sectors.

PART V – CONCLUSION AND DIRECTIONS FOR FUTURE RESEARCH

9 CONCLUSION

This chapter concludes the thesis by presenting its key findings and contributions. The theoretical, methodological and practical contributions of the thesis' findings will be discussed and directions for future research will be suggested.

9.1 KEY FINDINGS AND RESULTS

This thesis applied the theory of activity and goal-directed action to the study of online shopping actions with fruitful results. It met its key objectives of generating a taxonomy of consumer online actions, developing a typology of online shoppers and analysing the usability of retail websites based on an understanding of consumer online actions. The objective was met on three fronts:

Qualitative analysis of online shopping actions. From these qualitative findings, the key structural, cognitive and dispositional dimensions of online shopping actions were identified;

Quantitative analysis of online shopping actions through a pilot survey on the structural, cognitive and dispositional dimensions of typical online shopping actions. The survey results produced a taxonomy of consumer online actions from which a typology of online shoppers was generated.

Qualitative usability analysis of retail websites based on their ability to take into account the typical behavioural traits of online shoppers.

9.1.1 Qualitative findings

The qualitative analysis of online shopping actions achieved the following:

- The establishment of typical behavioural sequences which online shoppers perform and a proposal of several typical online shopping action structures including state-oriented varying goal, state-oriented fixed goal, action-oriented varying goal, action-oriented fixed goal, multi-tasking, routinised and knowledge-driven structures.

- An understanding of the inter-relations amongst the structural, cognitive and dispositional dimensions of online shopping actions.

- An appreciation of the impact which situational variables such as the nature of the World Wide Web, hypertextual media, intelligent agents and interface design have on online shopping actions.

- The introduction of several concepts relating to online shopping and to online behaviour as a whole, including the concepts of script conflict and conditioned impulse purchases as a result of goal deferment.

The salient structural dimensions were hierarchical-sequential structure and multi-tasking online and multi-tasking offline. Online shopping actions have predominantly hierarchical-sequential structures due partly to the World Wide Web being a hypertextual "pull" medium. The interactivity of online interfaces adds to the complexity of online shopping actions as shoppers find themselves interacting with an inanimate, yet "intelligent" interface which can respond to them based on their inputs. This leads to bidirectional adaptation on the part of both the shopper and the interface. The ease of multi-tasking online and offline also heightens the complexity of online shopping actions.

Goal generation processes occur in online shopping but differ slightly from goal generation processes in conventional shopping because they occur throughout rather than at the beginning of the shopping process. This is due to the low search costs in online shopping and the minimisation of temporal and spatial constraints. Goal divergence or varying goals occur in online shopping due to the multifarious possibilities offered by the hypertextual World Wide Web environment. Online shopping also offers the unique possibility of goal deferment and of "rehearsing" purchases because the costs of visiting and revisiting a store are negligible.

Action steering cognitions occur at a high frequency in online shopping due also to the nature of the Web as a hypertextual "pull" medium where the online shopper has to constantly plan and decide on his next course of action. Action monitoring actions serve to assess the efficacy of each action in achieving the desired goal. Information overload tends to occur in online shopping as the shopper has to process copious amounts of information and to constantly decide on which course of action to take next. This leads to the development of picking behaviour where the shopper decides on his actions in a random manner to give his brain a reprieve from a mentally intense activity. At the same time, automatic actions which occur in reaction to environmental stimuli and are not

cognitively directed also present in online shopping. It was also established that emotions have a role to play in goal enactment in that they serve to energise and motivate the actor into his enacting his goal. At the same time, emotions also influence the formation or reinforcement of long-term dispositions towards an activity or object.

Online shoppers require relevant knowledge about the workings of e-commerce and consumer protection mechanisms and the use of specific Internet technologies to guide their actions. The concurrent availability of online shopping and conventional shopping results in an intermigration of mental representations from one shopping environment to another. This intermigration results in script conflict where the shopper uses his conventional shopping script online and if a disparity exists between that and the online shopping script, feelings of uncertainty and insecurity are aroused and trust in the interface is undermined.

The attitudes of price-consciousness and store-consciousness were found to have the greatest bearing on online shopping actions. Price-consciousness relates to a desire to seek value for money while store-consciousness relates to a concern for the reliability of an online store. Price-consciousness and store-consciousness seem to lie on a continuum where the more price-conscious an online shopper is, the less store-conscious he/she is and vice versa. It was also established that in online shopping, there is an absence of social control because the online store is an inanimate and non-judgemental interface unlike conventional shopping which has the baggage of social norms.

State-orientation and action-orientation are self-regulatory processes which influence online shopping actions as well. State-oriented online shoppers are more susceptible to environmental influences and to have varying goals. Action-oriented shoppers on the other hand are more likely to adhere to their pre-planned actions and to have fixed goals. Flow affects the motivation state of online shoppers by making them more likely to surf online stores for prolonged periods rather than to simply fulfil their goals. Online shoppers who experience flow are also more likely to make purchases rather than to just surf. Online shoppers engage in mediated asynchronous interactions

rather than synchronous interactions when yet they shop online. They consult family and friends through email and peruse consumer reviews posted by other consumers.

The technological mediation of shopping by the Internet and the effects of this mediation on an everyday activity were considered. Online shopping eradicates the pressures of conventional shopping and can serve as a form of recreation. Individuals enjoy autonomy and anonymity in online shopping. They also derive experiential pleasures from daydreaming about the products which they come across online and satisfaction from obtaining good deals online in the form of smart-shopper feelings. Smart-shopper feelings seem to be heightened online as shoppers feel a sense of achievement at having made sense of the unwieldy realm of the World Wide Web. However, consumers are ambivalent about online shopping because of the risks involved. Trust becomes a particularly important issue in online shopping because the interacting party is a faceless computer screen. Online shoppers use a range of methods to assess trust and many rely on their intuition rather than on concrete trust guarantees offered by the stores. The use of personalisation devices can also be counter-productive, raising the alarm of online shoppers rather than making them feel special and welcomed by the store. The likelihood of making impulse purchases online is another cause for consumer ambivalence towards online shopping.

The issue of social gains in online shopping was also investigated. The absence of online store loyalty was noted, and may be attributed to the facelessness of online stores. Online communities did not seem to play an important role in online shopping. Instead, there was a dismissive attitude towards online communities and the chat rooms where online communities are usually fostered. The effects of the technological mediation of shopping on mental accounting processes was also discussed. It appeared that the psychological purse is smaller for online shoppers due to the inability of consumers to personally inspect the product, the ease of comparison shopping online and the integration of the banking and shopping environments online. The possibility of conditioned impulse purchases occurring online as a result of goal deferment and certain website features was also explored. Gender differences in online shopping were also discussed, wherein women appear to derive pleasure from the experiential aspects of

interaction with the store interface whereas men derive pleasure from obtaining good deals online.

The qualitative analysis of retail websites helped to identify the features of websites which take into account the typical behavioural characteristics of online shoppers. Website features which aid product search, consumer decision making and which facilitate more natural shopper-store interaction were identified from existing literature and used to analyse the usability of state-oriented and action-oriented websites of online book, CD, travel services and apparel stores. In general, action-oriented websites are better able to aid consumers' expeditious product identification whereas state-oriented websites are better able to induce affect and flow in online shoppers. It was proposed that the typical behavioural characteristics of online shoppers can be used as value-added humanistic usability criteria for analysing website usability.

9.1.2 Quantitative results

The quantitative analysis of online shopping actions achieved the following:

- The design of a survey instrument which investigates the structural, cognitive and dispositional dimensions of online shopping actions
- The generation of a four group taxonomy of consumer online actions
- The development of a theoretically grounded and empirically derived typology of online shoppers

A social psychological theory-based measurement instrument was developed to assess the action dimensions of online shopping and to typologise online shoppers. The results of the survey were subjected to a cluster analysis which produced a multi-variable classification scheme, capable of capturing the different structural, cognitive and dispositional dimensions of online shopping. The results of the numerical taxonomy showed that distinct patterns of online shopping actions exist. From the taxonomy of online shopping actions, a typology of online shoppers was developed. Four online shopper types with distinct online shopping action structures could be discerned: (i) Action-oriented, price-conscious deliberators; (ii) Knowledge-driven, flow-oriented scanners; (iii) State-oriented, varying goal multi-taskers; and (iv) Action-oriented, store-

conscious goal satisfiers. Each of these shopper types was elaborated upon and matched with their socio-economic profiles and their experience with the Internet and online shopping.

9.2 Critical Reflections on the Theory of Activity and Goal-directed Action

Having applied the theory of activity and goal-directed action to the study of online shopping behaviour for the first time, it is incumbent upon me to reflect on the heuristic value and the limitations of the theory with regard to the study of online behaviour, consumer behaviour and human-computer interaction in general. Goal-directed action theory and its espoused self-confrontation interview method afforded a descriptive analysis of online shopping actions. This was useful for a detailed step-by-step analysis of online shopping actions. However, the theory has several limitations when applied to online behaviour and consumer behaviour.

First, the trichotomy of supergoals, concrete action goals and sub-goals is rather rigid and is not ideally suited to the study of online behaviour and human-computer interaction. This is because the online environment is a multi-layered one which facilitates multi-tasking. On the computer itself, the prevailing Windows environment enables people to run several programmes simultaneously and to toggle between different windows. Within the World Wide Web, the hypertextual environment also enables people to weave seamlessly in and out of different websites and different sections and pages of these sites. As a whole, when people are surfing the Internet and shopping online, they can concurrently pursue a multitude of varied goals within a diversity of environments. Their supergoals, concrete action goals and sub-goals can all shift in status from supergoals to sub-goals depending on the response of interactive interfaces and the architecture and layout of websites. This goal classification scheme is perhaps inappropriate for the online environment and does not significantly enhance our understanding of either online behaviour or online shopping behaviour. A more useful classification of goals as applied to the online environment could be inherent goals, environmentally-induced goals and inherent, environmentally-influenced goals. Inherent goals would refer to the goals which the individual has originally, before he/she

commences his online activity. For example, an online shopper decides to go online to look for a book by J.K. Rowling. An environmentally-induced goal would be one which the individual did not have before his/her online activity, but which the online environment stimulates in the individual after commencing online activity. For example, an online shopper goes online to see what the latest books are, notes an advertisement for a book by J. K. Rowling and decides to buy it. An inherent, environmentally-influenced goal would be a goal which the individual has before commencing his/her online activity but which is further developed, influenced or shaped by stimuli in the online environment. For example, an online shopper decides to go online to look for a book by J. K. Rowling and notes another author who writes books of a similar genre such as Eoin Colfer. He/She then decides to buy books by Colfer instead. This proposed goal classification system is more suited to the online environment as it does not organise goals hierarchically and it takes into account the interaction between the individual and the online environment.

Second, the theory also makes a distinction between the control of action on the goal determination, tactical and operational levels. The theory states that on the goal-determination level, actors consciously choose amongst their competing goals and on the tactical level, actors cognitively control their different action routes while on the operational level, action steps are self-regulated. While the division of action structures into the goal determination, tactical and operational levels is of some heuristic value, the assumption that there is cognitive control of action on some levels and self-regulation on others is perhaps misplaced. It is conceivable for goal-determination and the choice of different action routes to be self-regulated or to be emotionally influenced e.g. consider the case of an impulse buy where a shopper comes across another product and is diverted from his/her original purchase intention. His/Her intention to buy this new product can be an automatic reaction to product stimuli rather than a cognitively controlled choice. Therefore, this distinction between cognitively controlled and self-regulated action levels is too rigid for understanding phenomena such as impulse buying behaviour and for understanding actions in interactive online environments with stimuli that can stimulate affective responses.

Third, the theory of activity and goal-directed action makes no distinction between long-term goals and short-term goals. In effect, it only analyses the short-term action-related goals which occur in the spatial-temporal context in which the action is executed. However, most individuals have a host of long-term and unfulfilled goals which exert some influence on their day-to-day actions and they have short-term goals which direct short-term actions at the same time. For example, consider the scenario of an online shopper who is shopping for plane tickets for his/her next business trip. Suppose however that his/her long-term goal has been to treat him/herself to a resort vacation. While he/she is shopping for the former and is directed by the goal of obtaining a cheap fare for the business trip, he/she may come across a resort vacation that fulfils his/her long-term goal. He/She would then be drawn to the advertisement for the resort vacation and seek to explore that section of the website. As a consequence, his/her actions are influenced by both long-term and short-term goals.

Fourth, in connection with the previous point, the theory of activity and goal-directed action overlooks instances of unfulfilled and deferred goals where people do not simply execute actions according to an immediately preceding goal. They may execute actions in order to achieve earlier conceived goals which had been held in abeyance, while fulfilling a more recent goal. Action analysis according to the theory tends to focus on actions which terminate in goal fulfilment. However, in day-to-day activity, people often do not fulfil their goals at a specific time but indefinitely defer goal fulfilment to a later time. Such behaviour was demonstrated by some interviewees who chose not to immediately purchase particular products which they saw but to take more time to deliberate and consider their purchase options. This principle of goal deferment is especially important for understanding online shopping as online stores enable shoppers to visit and revisit at little time and energy costs. Also, as seen in Chapter 8, online stores are starting to offer more features and services which support goal deferment.

Fifth, the theory of activity and goal-directed action is less suited to the study of human-computer interaction than to human-to-human interaction – its traditional focus. It assumes that all human-to-human interactions are guided by a mutually agreed and recognised set of social norms. That is however not the case in human-computer

interaction which is essentially asocial, e.g. many of the interviewees felt liberated by the fact that they were dealing with faceless computer interfaces rather than human salespeople. Yet, online shoppers interacting with online store interfaces may at some level still be guided by some social norms, e.g. one interviewee, Nicole, felt obliged to purchase products from Bramarket.com because she empathised with the fact that it was a small shop operated by a husband and wife team rather than a large corporation. At the same time, many computer-driven, online store interfaces are designed to mimic and anticipate human behaviour, whether perfectly or imperfectly. These "humanistic" interfaces are designed to reflect prevailing social norms, e.g. greeting online shoppers automatically. The social norms which guide human-computer interaction and consumer-online store interaction are therefore rather unclear, much less mutually agreed between online store and online shopper.

Sixth, the role which emotions play in action is not well-explored by the theory of activity and goal-directed action. In this regard, it assumes an approach which more closely approximates the information-processing approach. It focuses predominantly on the role of goals in guiding actions and tends to analyse all actions, as well as emotions, from a goal-centric perspective. It fails to consider how emotions can influence the formation or reinforcement of attitudes, dispositions and future behaviour. Yet, as seen in Chapters 3 and 4 of the thesis, emotions can play a significant role in guiding actions and shaping or reinforcing attitudes. Emotions are also an important dimension of consumer behaviour given the symbolic and functional roles of material possessions (Belk 1988; Dittmar 1992; 1994; Richins 1994a; Christopher and Schlenker 2000) and the recreational and experiential dimensions of shopping (Holbrook and Hirschman 1982; Bloch and Bruce 1984; Hirschman 1984; Sherry 1990; Campbell 1997). Emotions are also significant in online behaviour as shown by research on flow and interaction with virtual reality environments where positive affect has been known to arise as a result of flow experience in these environments (Hoffman and Novak 1996; Novak, Hoffman et al. 2000; Rettie 2001).

Seventh, the theory of activity and goal-directed action stipulates that in addition to considering the actors, action analysis must also consider the spatial and temporal

dimensions of an action and the constraints of these dimensions on actors. This stipulation is difficult to comply with when the theory is applied to online behaviour. The temporal dimension is difficult to assess in an online action because of the possibility of multi-tasking and goal deferment. An online action can therefore take place over an extended period of time and with many interruptions. As for the spatial dimension, the question arises as to which space is to be taken into account – the virtual space occupied by the individual and the online interface while they are interacting, or the physical space occupied only by the individual? It is therefore difficult to assess the spatial and temporal constraints on action as applied to online behaviour.

Eighth, the theory of activity and goal-directed action prescribes that actions be separated into action steps. This is somewhat cumbersome when applied to human-computer interaction and online behaviour because the web environment is extremely multi-faceted and complex. Retail websites in particular have several focal points and stimuli of varied colours and fonts crammed into single webpages. As a result, web users are able to scan and explore many different parts of a website within a small period of time. In which case, if we adopt the theory's action step rubric, should a scan of each item be considered an action step or should the scanning of an entire webpage be considered as an action step? (This thesis considered the latter as an action step.) This separation of actions into the micro-level perspective of action steps is difficult to apply to the study of online behaviour unless hardware which tracks eye movement across a computer screen is employed. However, use of such hardware is both time-consuming and costly. Researchers will have to assess whether their research goals necessitate the separation of online actions into these minute action steps or whether a less precise level of analysis is sufficient. Research into the human-computer interaction design may benefit from that level of precision but research into online shopping behaviour may not benefit significantly.

Researchers who adopt the theory of activity and goal-directed should thus be aware of the deficiencies of the theory in the afore-mentioned aspects. For the theory to be applied fruitfully to the study of online behaviour and consumer behaviour in future, some refinements to the theory will have to be made.

9.3 CONTRIBUTIONS TO THEORETICAL DEVELOPMENT

This thesis made several contributions to our understanding of consumer actions and online behaviour. Specifically, contributions have been made to the theory of activity and goal-directed action and the fields of consumer psychology and human-computer interaction.

Principally, this thesis extended goal-directed action research beyond the traditional areas of work activity and social interaction and into the realm of consumer behaviour. This thesis also explained the concept of goal deferment, in which a goal can be held in abeyance and be fulfilled at a later time. Research on the theory of activity and goal-directed action should be expanded to explore more situations of goal deferment and of how these long-held goals influence actions as compared to short-term goals. This thesis also demonstrates that the theory of activity and goal-directed action can be applied to the study of online behaviour with interesting results. However, as discussed in section 9.2, the theory has to be refined in order for it to be applied to the study of online behaviour and consumer behaviour. Principally, its strict goal classification schemes and assumptions of cognitive control and its overemphasis on goals and de-emphasis on emotions have to be reconsidered.

This thesis introduced a new theoretical dimension to consumer psychology by applying the theory of activity and goal-directed action to the study of online shopping. The findings show that that the theory of activity and goal-directed action can provide a useful framework for understanding consumer behaviour. It enhances consumer psychology by proving a social psychological understanding of a technologically mediated activity. It also shows that consumer actions are not monolithic but are multi-dimensional, with structural, cognitive and dispositional dimensions. Without a proper appreciation of these different action dimensions, a more multi-faceted understanding of consumer behaviour cannot be achieved.

This thesis discussed how the technological mediation of shopping by the Internet affects the everyday process of shopping. The findings show that there are many issues which can be addressed by consumer psychology including the social implications of

conditioned impulse purchases, measures for enhancing trust in online shopping and factors which contribute to online store loyalty.

This thesis made several findings on the nature of online behaviour and provided a more comprehensive picture of the structural, cognitive and dispositional dimensions of online behaviour. It adopted a user-centred rather than system-focused perspective of human-computer interaction which takes into account the user's motivational and attitudinal characteristics. Human-computer interaction tends to view the computer interface user as a human information processor (Card, Moran et al. 1983). Quite clearly, that narrow view of the computer interface user has to be reassessed unless we wish to reduce all human actors to machines.

The concept of script conflict was introduced. When using any computer software or interface, the user has in mind a model of how the computer will perform the task. When a disparity exists between the user's conception of actions required to fulfil a goal and the actions which the system interface actually allows, a gulf of execution results. Script conflict is a unique manifestation of the gulf of execution because it pertains to activities which transcend two different environments – the physical offline environment and the virtual online environment. More research into situations of script conflict need to be conducted in order for the field of human-computer interaction to keep pace with the growing ubiquity of computer usage and the heightened importance of both the offline and online environments in individuals' lives.

This thesis also discussed the phenomenon of information overload in online activity where the user has to process copious amounts of information and to constantly decide on which course of action to take next. Picking behaviour occurs as a result where the user decides on his actions in a random manner to give his brain a reprieve from the mental intensity. Research on human-computer interaction needs to tackle this problem of information overload and suggest means to alleviate it, in light of the intensified adoption of computers in modern society.

At the same time, this thesis showed that automatic actions occur online, without the aid of action steering cognitions but in reaction to environmental stimuli. Human-

computer interaction research can consider how and in what situations automatic actions occur during computer usage. Interfaces can be designed to take advantage of automaticity for accelerating task performance. At the same time, interfaces need to be designed to prevent the occurrence of automatic actions that could contribute to system or task execution failure, e.g. users automatically shutting down alerts or warnings.

9.3.1 Contribution to methodological development

This thesis made a methodological contribution by applying the self-confrontation interview method (Cranach and Kalbermatten 1982) to the study of online behaviour. The findings show that the self-confrontation interview can be used to study a broad range of online behaviour including interaction with specific website genres such as news and information sites, online medical consultations, online government services, online stock trading, online gambling etc.

The self-confrontation interview method will also be of great value to the enhanced understanding of human-computer interaction in general. In particular, it will be very useful in the fields of software ergonomics, where the participation of users in the system design process is considered integral, such as the ETHICS design method (Mumford 1983) and other user-centred approaches to systems and software design (Smith 1997; Shneiderman 1998). By applying the self-confrontation interview method to the study of online behaviour, this thesis also demonstrated the versatility of this method and broadened its applicability.

9.4 Practical Contributions

This thesis' findings also have practical implications. Chapter 8 outlines how store interfaces can be improved for specific store genres in order for online stores to better accord with typical online shopping behaviour and to better take into account the human factors which impinge on online shoppers' interactions with retail interfaces.

This thesis' findings also have implications for the diffusion of e-commerce. First, enhancing trust in online store interfaces is key to increasing the diffusion of e-commerce. Conducting an everyday activity such as shopping through a faceless

inanimate medium makes the shopping process fraught with risk and uncertainty. The efforts of online stores to customise the online shopping experience through personalisation devices can be counter-productive. They raise the alarm of consumers, reminding them that they are being tracked by the online store, rather than making them feel special or welcomed by the store. When assessing the trustworthiness of online stores, online shoppers do not have strict criteria but use a variety of intuitive methods. In light of this, online stores need to improve on several fronts to enhance trust, e.g. presenting a professional appearance, improving functionality, introducing control trust mechanisms, seeking the customers' consent when installing personalisation devices such as cookies.

Second, the design of online store interfaces needs to be improved to take into account the typical behavioural traits of online shoppers. With improved interfaces, online shopping becomes simpler and this will help to enhance its adoption rate. Third, the compatibility of e-commerce to existing shopping methods needs to be increased. Consumers who are accustomed to conventional shopping will then find that taking the leap from conventional to online shopping is not so great. In this regard, the concept of script conflict is an important one as averting script conflict results in an increased compatibility between online shopping and conventional shopping.

9.5 Limitations Of Existing Study

This study had several limitations which can be addressed in future research. It adopted a corpus construction approach to assess a variety of online shoppers and online shopping experiences. Therefore, it is difficult to generalise the findings across users of varying experience levels or across different store genres. That however was not the goal of this thesis, which focused mainly on identifying salient action dimensions of online shopping. Future studies can take this thesis' findings as a guide to further research and focus on specific store genres, product categories or user types. Similarly, the findings which can be drawn from the survey results are indicative rather than conclusive given the small sample size. Nonetheless, the results established that online shoppers can be meaningfully typologised according to the structural, cognitive and dispositional

dimensions of their online shopping actions. Further research can involve surveys of a larger scale and more representative online shopping populations. The qualitative analysis of retail websites was also an exploratory one of specific store genres and a select number of websites. It is therefore difficult to generalise its conclusions across categories of retail websites. However, the findings show that a usability analysis of websites using humanistic rather than mechanistic criteria can yield interesting and instructive results.

9.6 DIRECTIONS FOR FUTURE RESEARCH

The qualitative and quantitative methodological frameworks laid out in this thesis can be usefully applied to future research into online shopping and online behaviour in general. Here are several suggestions for future research.

9.6.1 Qualitative research

Several issues require further qualitative research. With regard to our understanding of online shopping behaviour, further study can be made of consumer actions within specific online store genres to assess how online shopping actions vary with different store designs. Research can also be conducted into how online shopping actions differ for specific product or service categories. The study can also be replicated with groups of shoppers of varying experience levels to assess the effects of user experience on online shopping actions. For these studies, the self-confrontation interview method can be applied.

Goal-directed action research can be extended to explore more situations of goal deferment in order to understand how these long-held goals influence actions as compared to short-term goals. Further research can also be conducted on human-computer interaction involving "intelligent" agents which are devoid of social norms. Further study can be also made of situations of mediated synchronous and asynchronous interaction between humans and humans or humans and machines. Specifically, analyses should be made of the structural, cognitive and dispositional dimensions governing actions in such situations.

With regard to human computer interaction, the concept of script conflict needs to be further investigated as it will assume greater significance in light of more activities being conducted both online and offline. The affordances of the online and offline environments need to be carefully analysed so that disparities can be minimised. Further research also needs to be conducted on the phenomenon of information overload to suggest how it can be alleviated. Research should also be conducted into automatic actions which occur during online activity to further explore when and why these automatic actions occur.

On the consumer psychology front, research should now be conducted into measures for enhancing trust in online shopping, the effect of celebrity endorsers on the attitudes, store loyalty and trust assessments of online shoppers and the social implications of conditioned impulse purchases, and factors impeding the diffusion of online shopping. A more extensive qualitative analysis of retail websites of specific product/service genres can also be undertaken to identify product-specific website features for enhanced website usability.

9.6.2 Quantitative research

Future quantitative research can take its cue from the pilot trial results. First, a full-scale survey can be conducted on a more representative sample of the US online shopping population. Discriminant analysis can then be conducted to assess which action-related variables have the greatest discriminant value and therefore exert more influence on typical online shopping actions. Second, a long-term survey can be conducted by making the survey available online for an extended period of time. Results can then be collated and analysed across different time periods. Third, a comparative study can be made on online shoppers of different countries to investigate whether regional differences exist in online shopping behaviour. Fourth, the survey can be applied to shoppers of specific online store genres, e.g. apparel sites, travel-related sites etc. to assess whether and how online shopping actions vary according to the nature of the online store. Fifth, a quantitative study of consumer assessments of websites of different retail sectors can be conducted to study how the different website usability criteria vary in importance for

specific retail sectors. This study can take the form of usability surveys amongst online shoppers of these different retail sectors.

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PART VI - APPENDICES

Appendix 1: Self-administered questionnaire used in interviews

Questionnaire

Section I: In this section, consider each situation and the response options provided. Select the sentence which you think best describes yourself by placing a tick next to it.

1. If I had to work at home
   __ I would often have problems getting started
   __ I would usually start immediately

2. When I want to see someone again
   __ I try to set a date for the visit right away
   __ I plan to do it some day

3. When I have a lot of important things to take care of
   __ I often don't know where to start
   __ it is easy for me to make a plan and then stick to it

4. When I have two things that I would like to do and can do only one
   __ I decide between them pretty quickly
   __ I wouldn't know right away which was most important to me

5. When I have to do something important that's unpleasant
   __ I'd rather do it right away
   __ I avoid doing it until it's absolutely necessary

6. When I really want to finish an extensive assignment in an afternoon
   __ it often happens that something distracts me
   __ I can really concentrate on the assignment

7. When I have to complete a difficult assignment
   __ I can concentrate on the individual parts of the assignment
   __ I easily lose my concentration on the assignment

8. When I fear that I'll lose interest during a tedious assignment
   __ I complete the unpleasant things first
   __ I start with the with the easier parts first

9. When it's absolutely necessary that I perform an unpleasant duty
   __ I finish it as soon as possible
   __ it takes a while before I start on it

10. When I've planned to do something unfamiliar in the following week
    __ it can happen that I change my plans at the last moment
    __ I stick with what I've planned

11. When I know that something has to be done soon
__ I often think about how nice it would be if I were already finished with it
__ I just think about how I can finish it the fastest

12. When I'm sitting at home and feel like doing something
__ I decide on one thing relatively fast and don't think much about other possibilities
__ I like to consider several possibilities before I decide on something

13. When I don't have anything special to do and am bored
__ I sometimes contemplate what I can do
__ it usually occurs to me soon what I can do

14. When I have a hard time getting started on a difficult problem
__ the problem seems huge to me
__ I think about how I can get through the problem in a fairly pleasant way

15. When I have to solve a difficult problem
__ I think about a lot of different things before I really start on the problem
__ I think about which way would be best to try first

16. When I'm trying to solve a difficult problem and there are two solutions that seem equally good to me
__ I make a spontaneous decision for one of the two without thinking much about it
__ I try to figure out whether or not one of the solutions is really better than the other

17. When I have to study for a test
__ I think a lot about where I should start
__ I don't think about it too much: I just start with what I think is most important

18. When I've made a plan to learn how to master something difficult
__ I first try it out before I think about other possibilities
__ before I start, I first consider whether or not there's a better plan

19. When I'm faced with the problem of what to do with an hour of free time
__ sometimes I think about it for a long time
__ I come up with something appropriate fairly soon

20. When I've planned to buy just one piece of clothing but then see several things that I like
__ I think a lot about which piece I should buy
__ I usually don't think about it very long and decide relatively soon

Section II: In this section, please provide some details about yourself:

What is your age?

16-20
21-25
26-30
31-35
36-40
41-45
46-50
51-55
56-60
60-65
65 or greater

What is your annual household income?

Rather not say
Under $20 K
$20K to less than $30K
$30K to less than $40K
$40K to less than $50 K
$50K to less than $60 K
$60K to less than $75 K
$75K to less than $100 K
$100K to less than $150 K
$150K to less than $200 K
$200 K or higher

What is your current marital status?

Rather not say
Single/never married
Married
Divorced/separated
Widowed
Domestic partnership

Please indicate the highest level of education completed:

Less than high school
High school graduate
Some college
Bachelor's degree
Master's/PhD degree

Which of the following best describes the area you live in?

Urban
Suburban
Rural

Appendix 2: Interviewee profiles

Name	Elaine	Glen	Gabrielle
Age group	21-25	21-25	31-35
Highest level of education completed	College education	College education	Master's degree
Gender	Female	Male	Female
Occupation	Graduate student	Graduate student	Homemaker
Income bracket	Under US$20 K	Under US$20 K	Under US$20 K
Type of area of residence	Urban	Urban	Urban
Number of years online	9	10	5
Number of years shopping on the Internet	6	6	3
Items purchased online	Clothing, footwear, homeware, computer peripherals	Plane tickets, computer peripherals	Baby's clothing, books, CDs
Sample of websites patronised	www.marthastewartliving.com, www.outpost.com, www.bananarepublic.com, www.gap.com	www.aa.com, www.ual.com, www.expedia.com	www.amazon.com, www.expedia.com
State/action orientation	Action-oriented	State-oriented	Action-oriented
Name	**Ian**	**Joe**	**Jan**
Age group	26-30	21-25	46-50
Highest level of education completed	Master's degree	College education	Master's degree
Gender	Male	Male	Female
Occupation	Graduate student	Information technology support staff	Publicist
Income bracket	Under US$20 K	US$60K to less than US$75K	US$100K to less than US$150K
Type of area of residence	Urban	Suburban	Suburban
Number of years online	9	5	4
Number of years shopping on the Internet	5	3	2
Items purchased online	CDs, books	Sporting equipment	Groceries, clothing, outdoor supplies, plane tickets
Sample of websites patronised	www.half.com, www.ebay.com	www.compusa.com	www.amazon.com, www.llbean.com
State/action orientation	State-oriented	Action-oriented	Action-oriented

Name	Jocelyn	Kevin
Age group	36-40	21-25
Highest level of education completed	College education	College education
Gender	Female	Male
Occupation	Hospital administrator	Graduate student
Income bracket	US$30K to less than US$40K	Under US$20K
Type of area of residence	Urban	Urban
Number of years online	2	9
Number of years shopping on the Internet	1/2	6
Items purchased online	Clothing, food, office supplies	Clothing, footwear, computer peripherals, plane tickets, electronic equipment, CDs, books
Sample of websites patronised	www.payless.com, www.victoriassecret.com	www.outpost.com, www.gap.com
State/action orientation	Action-oriented	State-oriented
Name	**Nicole**	**Nick**
Age group	21-25	56-60
Highest level of education completed	College education	College education
Gender	Female	Male
Occupation	Graduate student	Senior management
Income bracket	Under US$20K	Rather not say
Type of area of residence	Urban	Urban
Number of years online	7	40
Number of years shopping on the Internet	5	6
Items purchased online	Clothing, footwear, computer peripherals, office supplies	Plane tickets, car reservations, hotel reservations, computer peripherals, books, CDs
Sample of websites patronised	www.victoriassecret.com, www.gap.com, www.oldnavy.com, www.officemax.com	www.amazon.com, www.brooksbothers.com, www.travelocity.com, www.priceline.com
State/action orientation	Action-oriented	Action-oriented

Name	**Mike**	**Susan**
Age group	46-50	31-35
Highest level of education completed	Master's degree	Master's degree
Gender	Male	Female
Occupation	Senior management	Jewellery designer
Income bracket	US$100K to less than US$150K	US$20K to less than US$30K
Type of area of residence	Urban	Urban
Number of years online	8	9
Number of years shopping on the Internet	3	5
Items purchased online	Food, plane tickets, hotel reservations, household products	Clothing, books, CDs
Sample of websites patronised	www.omahasteaks.com, www.expedia.com, www.travelocity.com	www.amazon.com, www.landsend.com
State/action orientation	Action-oriented	State-oriented
Name	**Pam**	**Tom**
Age group	21-25	36-40
Highest level of education completed	Some college	College education
Gender	Female	Male
Occupation	Administrator	Information technology administrator
Income bracket	US$30K to less than US$40K	US$40K to less than US$50K
Type of area of residence	Urban	Urban
Number of years online	6	7
Number of years shopping on the Internet	1	4
Items purchased online	Software	Computer peripherals, books, CDs
Sample of websites patronised	www.potterybarn.com	www.mac.com, www.outpost.com, www.amazon.com
State/action orientation	State-oriented	State-oriented

Appendix 3: Survey Questionnaire

Online Shopping Questionnaire

This questionnaire is about your experience with online shopping. There are three sections and it should take you about 5 minutes to fill out the questionnaire. Please answer *every* question and reflect on your own experience of online shopping as you answer them.

Section I: In this section, think about your own experience with online shopping. There are no right or wrong answers. For each item, simply select one of the two statements which more accurately describes your **usual** online shopping action by placing a check next to it:

1.
   (a) ____ When I shop online, I do other things at the same time e.g. cook, watch television, read a magazine etc.
   (b) ____When I shop online, I focus solely on shopping online.

2.
   (c) ____ When I shop online, I do other things *on my computer* at the same time e.g. check e-mail, join an online chat, work on a word-processing document etc.
   (d) ____When I shop online, I focus solely on shopping online.

3.
   (a) ____ When I shop online, I use my main considerations e.g. price, brand, colour etc. to narrow down which products to look at.
   (b) ____When I shop online, I look at products in a random manner, with no particular considerations in mind.

4.
   (a) ____When I shop online, I usually decide on my purchases on my own, without consulting anyone.
   (b) ____When I shop online, I usually decide on my purchases after consulting either family, friends or store representatives.

Section II: In this section, indicate your level of agreement with each of the following statements by checking the appropriate box. Please remember that there are no right or wrong answers. Simply think about your own experience with online shopping as you read the statements.

1. When I shop online, I like to complete my shopping task as quickly as I can.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

2. I only shop at online stores which give me value for money.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

3. When I shop online, I think hard about which online stores to surf and study the products closely.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

4. I shop online for the pure enjoyment of it.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

5. I know exactly what I want before I begin to shop online.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

6. I'm willing to shop at online stores which I've not heard of, as long as they offer low prices.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

7. When I shop online, I click only on products which I had already planned to buy.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

8. Online shopping helps me forget about the day's problems.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

9. When I shop online, I like to take my time.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

10. Online shopping is very entertaining.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

11. I shop online with no idea of what I want exactly, and let what I see guide me.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

12. I shop online only when I need something.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

13. I only shop at websites of well-known and established stores.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

14. When I shop online, I ignore all online advertisements.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

15. When I shop online, price is my only consideration.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

16. When I shop online, I click on any product which looks interesting.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

17. I only shop at online stores which have given me good service in the past.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

18. When I shop online, I simply surf any online store which comes to mind and scan through the products quickly.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

19. When I shop online, the security of an online store is my only consideration.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

20. Online shopping helps me manage my time efficiently.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

21. When I shop online, I click on online advertisements which attract me.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

22. Online shopping is very convenient.

Strongly Disagree	Disagree	Disagree Slightly	Undecided	Agree Slightly	Agree	Strongly Agree

***Section III**: In this section, please provide some details about yourself:*

1. What is your sex?

Male Female

2. What is your age?

16-20	31-35	46-50	60-65
21-25	36-40	51-55	65 or greater
26-30	41-45	56-60	

3. Which of the following best describes your occupation?

Student	Trained professional
Retiree	Administrative staff
Homemaker	Support staff
Self-employed	Skilled labourer
Senior management	Consultant
Middle management	Temporary employee
Junior management	Researcher

4. What is your annual household income?

Under $20 K	$75K to less than $100 K
$20K to less than $30K	$100K to less than $150 K
$30K to less than $40K	$150K to less than $200 K
$40K to less than $50 K	$200 K or higher
$50K to less than $60 K	Rather not say
$60K to less than $75 K	

5.What is your current marital status?

Single/never married
Married
Divorced/separated
Widowed
Domestic partnership
Rather not say

6. Please indicate the highest level of education completed:

Less than high school
High school graduate
Some college
Bachelor's degree
Master's/PhD degree
Rather not say

7. Which of the following best describes the area you live in?

Urban Suburban Rural

8. How long have you been using the Internet for?

One to six months
Six months to one year
One to three years
Three to five years
More than five years

9. How long have you been shopping online for?

One to six months
Six months to one year
One to three years
Three to five years
More than five years

10. On average, how much money do you spend on online shopping in a month?

Less than $50
$50 - $100
$100 - $300
$300 - $500
More than $500

11. What products and services have you purchased over the Internet? Please check all that apply.

Clothing
Food and wine
Computer hardware and software
Books/magazines/CDs
Airplane and hotel reservations
Others, please specify: _____

12. In your experience of shopping online, which of the following Internet technologies have you used? (Please check all that apply.)

Search engines, e.g. yahoo.com, google.com, altavista.com
Comparison shopping websites, e.g. mysimon.com, dealtime.com, storerunner.com
Product review websites, .e.g. productreviewnet.com, consumersearch.com
Participated in a chat, newsgroup or web forum to discuss online shopping matters
Downloaded online shopping software, e.g. SmartStart at roboshopper.com
Viewed the Java/Java script of an online store/ retail website
Others, please specify: _____

- Thank you -

Appendix 4: Frequencies for questionnaire responses and correlation matrix

Section I:

1.

(e) ____ When I shop online, I do other things at the same time e.g. cook, watch television, read a magazine etc.

(f) ____When I shop online, I focus solely on shopping online.

Multi-tasking offline

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Multi-tasking offline	80	80.0	80.0	80.0
	Multi-tasking offline	20	20.0	20.0	100.0
	Total	100	100.0	100.0	

2.

(a) ____ When I shop online, I do other things *on my computer* at the same time e.g. check e-mail, join an online chat, work on a word-processing document etc.

(b) ____When I shop online, I focus solely on shopping online.

Multi-tasking online

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Multi-tasking online	52	52.0	52.0	52.0
	Multi-tasking online	48	48.0	48.0	100.0
	Total	100	100.0	100.0	

3.

(c) ____ When I shop online, I use my main considerations e.g. price, brand, colour etc. to narrow down which products to look at.

(d) ____When I shop online, I look at products in a random manner, with no particular considerations in mind.

Hierarchical-sequential action

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Hierarchical-sequential action	8	8.0	8.0	8.0
	Hierarchical-sequential action	92	92.0	92.0	100.0
	Total	100	100.0	100.0	

4.

(c) ____When I shop online, I usually decide on my purchases on my own, without consulting anyone.

(d) ____When I shop online, I usually decide on my purchases after consulting either family, friends or store representatives.

Interactive actions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No interactive actions	66	66.0	66.0	66.0
	Interactive actions	34	34.0	34.0	100.0
	Total	100	100.0	100.0	

Section II:

23. When I shop online, I like to complete my shopping task as quickly as I can.

Action/state orientation (a)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	2	2.0	2.0	2.0
	D	17	17.0	17.0	19.0
	DS	11	11.0	11.0	30.0
	U	2	2.0	2.0	32.0
	AS	15	15.0	15.0	47.0
	A	31	31.0	31.0	78.0
	SA	22	22.0	22.0	100.0
	Total	100	100.0	100.0	

24. I only shop at online stores which give me value for money.

Price/Store consciousness (e)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	1	1.0	1.0	1.0
	D	9	9.0	9.0	10.0
	DS	7	7.0	7.0	17.0
	U	8	8.0	8.0	25.0
	AS	10	10.0	10.0	35.0
	A	33	33.0	33.0	68.0
	SA	32	32.0	32.0	100.0
	Total	100	100.0	100.0	

25. When I shop online, I think hard about which online stores to surf and study the products closely.

Propensity towards concentrating

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	2	2.0	2.0	2.0
	D	10	10.0	10.0	12.0
	DS	8	8.0	8.0	20.0
	U	3	3.0	3.0	23.0
	AS	20	20.0	20.0	43.0
	A	35	35.0	35.0	78.0
	SA	22	22.0	22.0	100.0
	Total	100	100.0	100.0	

26. I shop online for the pure enjoyment of it.

Flow (c)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	19	19.0	19.0	19.0
	D	37	37.0	37.0	56.0
	DS	10	10.0	10.0	66.0
	U	11	11.0	11.0	77.0
	AS	9	9.0	9.0	86.0
	A	10	10.0	10.0	96.0
	SA	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

27. I know exactly what I want before I begin to shop online.

Fixed/varying goal (a)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	1	1.0	1.0	1.0
	D	2	2.0	2.0	3.0
	DS	13	13.0	13.0	16.0
	U	5	5.0	5.0	21.0
	AS	30	30.0	30.0	51.0
	A	31	31.0	31.0	82.0
	SA	18	18.0	18.0	100.0
	Total	100	100.0	100.0	

28. I'm willing to shop at online stores which I've not heard of, as long as they offer low prices.

Price/store consciousness (c)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	6	6.0	6.0	6.0
	D	17	17.0	17.0	23.0
	DS	9	9.0	9.0	32.0
	U	13	13.0	13.0	45.0
	AS	19	19.0	19.0	64.0
	A	26	26.0	26.0	90.0
	SA	10	10.0	10.0	100.0
	Total	100	100.0	100.0	

29. When I shop online, I click only on products which I had already planned to buy.

Action/state orientation (c)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	3	3.0	3.0	3.0
	D	29	29.0	29.0	32.0
	DS	21	21.0	21.0	53.0
	U	3	3.0	3.0	56.0
	AS	17	17.0	17.0	73.0
	A	18	18.0	18.0	91.0
	SA	9	9.0	9.0	100.0
	Total	100	100.0	100.0	

30. Online shopping helps me forget about the day's problems.

Flow (a)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	31	31.0	31.0	31.0
	D	36	36.0	36.0	67.0
	DS	12	12.0	12.0	79.0
	U	9	9.0	9.0	88.0
	AS	7	7.0	7.0	95.0
	A	4	4.0	4.0	99.0
	SA	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

31. When I shop online, I like to take my time.

Action/state orientation (b)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	11	11.0	11.0	11.0
	A	30	30.0	30.0	41.0
	AS	16	16.0	16.0	57.0
	U	6	6.0	6.0	63.0
	DS	19	19.0	19.0	82.0
	D	13	13.0	13.0	95.0
	SD	5	5.0	5.0	100.0
	Total	100	100.0	100.0	

32. Online shopping is very entertaining.

Flow (e)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	11	11.0	11.0	11.0
	D	22	22.0	22.0	33.0
	DS	15	15.0	15.0	48.0
	U	15	15.0	15.0	63.0
	AS	23	23.0	23.0	86.0
	A	9	9.0	9.0	95.0
	SA	5	5.0	5.0	100.0
	Total	100	100.0	100.0	

33. I shop online with no idea of what I want exactly, and let what I see guide me.

Fixed/varying goal (b)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	1	1.0	1.0	1.0
	AS	13	13.0	13.0	14.0
	U	5	5.0	5.0	19.0
	DS	15	15.0	15.0	34.0
	D	33	33.0	33.0	67.0
	SD	33	33.0	33.0	100.0
	Total	100	100.0	100.0	

34. I shop online only when I need something.

Flow (d)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	22	22.0	22.0	22.0
	A	41	41.0	41.0	63.0
	AS	13	13.0	13.0	76.0
	U	3	3.0	3.0	79.0
	DS	13	13.0	13.0	92.0
	D	8	8.0	8.0	100.0
	Total	100	100.0	100.0	

35. I only shop at websites of well-known and established stores.

Price/store consciousness (d)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	9	9.0	9.0	9.0
	A	22	22.0	22.0	31.0
	AS	17	17.0	17.0	48.0
	U	8	8.0	8.0	56.0
	DS	21	21.0	21.0	77.0
	D	19	19.0	19.0	96.0
	SD	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

36. When I shop online, I ignore all online advertisements.

Action/state orientation (e)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	1	1.0	1.0	1.0
	D	4	4.0	4.0	5.0
	DS	15	15.0	15.0	20.0
	AS	10	10.0	10.0	30.0
	A	35	35.0	35.0	65.0
	SA	35	35.0	35.0	100.0
	Total	100	100.0	100.0	

37. When I shop online, price is my only consideration.

Price/store consciousness (a)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	3	3.0	3.0	3.0
	D	35	35.0	35.0	38.0
	DS	20	20.0	20.0	58.0
	U	9	9.0	9.0	67.0
	AS	20	20.0	20.0	87.0
	A	8	8.0	8.0	95.0
	SA	5	5.0	5.0	100.0
	Total	100	100.0	100.0	

38. When I shop online, I click on any product which looks interesting.

Action/state orientation (d)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	4	4.0	4.0	4.0
	A	17	17.0	17.0	21.0
	AS	31	31.0	31.0	52.0
	U	8	8.0	8.0	60.0
	DS	19	19.0	19.0	79.0
	D	14	14.0	14.0	93.0
	SD	7	7.0	7.0	100.0
	Total	100	100.0	100.0	

39. I only shop at online stores which have given me good service in the past.

Price/store consciousness (f)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	10	10.0	10.0	10.0
	A	18	18.0	18.0	28.0
	AS	17	17.0	17.0	45.0
	U	15	15.0	15.0	60.0
	DS	27	27.0	27.0	87.0
	D	11	11.0	11.0	98.0
	SD	2	2.0	2.0	100.0
	Total	100	100.0	100.0	

40. When I shop online, I simply surf any online store which comes to mind and scan through the products quickly.

Propensity towards casual scanning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	11	11.0	11.0	11.0
	D	28	28.0	28.0	39.0
	DS	19	19.0	19.0	58.0
	U	8	8.0	8.0	66.0
	DS	19	19.0	19.0	85.0
	D	11	11.0	11.0	96.0
	SA	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

41. When I shop online, the security of an online store is my only consideration.

Price/store consciousness (b)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	6	6.0	6.0	6.0
	A	8	8.0	8.0	14.0
	AS	18	18.0	18.0	32.0
	U	9	9.0	9.0	41.0
	DS	16	16.0	16.0	57.0
	D	37	37.0	37.0	94.0
	SD	6	6.0	6.0	100.0
	Total	100	100.0	100.0	

42. Online shopping helps me manage my time efficiently.

Flow (b)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	4	4.0	4.0	4.0
	A	25	25.0	25.0	29.0
	AS	22	22.0	22.0	51.0
	U	14	14.0	14.0	65.0
	DS	12	12.0	12.0	77.0
	D	19	19.0	19.0	96.0
	SD	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

43. When I shop online, I click on online advertisements which attract me.

Action/state orientation (f)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	2	2.0	2.0	2.0
	A	8	8.0	8.0	10.0
	AS	11	11.0	11.0	21.0
	U	4	4.0	4.0	25.0
	DS	11	11.0	11.0	36.0
	D	35	35.0	35.0	71.0
	SD	29	29.0	29.0	100.0
	Total	100	100.0	100.0	

44. Online shopping is very convenient.

Flow (f)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	18	18.0	18.0	18.0
	A	45	45.0	45.0	63.0
	AS	25	25.0	25.0	88.0
	U	7	7.0	7.0	95.0
	DS	4	4.0	4.0	99.0
	D	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

Section III:

1. What is your sex?

Sex of respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	48	48.0	48.0	48.0
	Female	52	52.0	52.0	100.0
	Total	100	100.0	100.0	

2. What is your age?

Age group of respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16-20	6	6.0	6.0	6.0
	21-25	17	17.0	17.0	23.0
	26-30	26	26.0	26.0	49.0
	31-35	19	19.0	19.0	68.0
	36-40	11	11.0	11.0	79.0
	41-45	6	6.0	6.0	85.0
	46-50	5	5.0	5.0	90.0
	51-55	3	3.0	3.0	93.0
	56-60	6	6.0	6.0	99.0
	60-65	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

3. Which of the following best describes your occupation?

Occupation of respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	41	41.0	41.0	41.0
	Homemaker	2	2.0	2.0	43.0
	Self-employed	7	7.0	7.0	50.0
	Middle mgmt	5	5.0	5.0	55.0
	Trained professional	28	28.0	28.0	83.0
	Administrative staff	3	3.0	3.0	86.0
	Support staff	2	2.0	2.0	88.0
	Skilled labourer	3	3.0	3.0	91.0
	Consultant	3	3.0	3.0	94.0
	Temporary employee	1	1.0	1.0	95.0
	Researcher	5	5.0	5.0	100.0
	Total	100	100.0	100.0	

4. What is your annual household income?

Annual household income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under $20K	26	26.0	26.0	26.0
	$20 - < $30 K	10	10.0	10.0	36.0
	$30 - < $40 K	13	13.0	13.0	49.0
	$40 - < $50 K	5	5.0	5.0	54.0
	$50 - < $60 K	9	9.0	9.0	63.0
	$60 - < $75 K	6	6.0	6.0	69.0
	$75- < $100K	13	13.0	13.0	82.0
	$100 - $150K	7	7.0	7.0	89.0
	$150 < $200K	1	1.0	1.0	90.0
	$200K or >	1	1.0	1.0	91.0
	Rather not say	9	9.0	9.0	100.0
	Total	100	100.0	100.0	

5.What is your current marital status?

Marital status of respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single/never married	50	50.0	50.0	50.0
	Married	43	43.0	43.0	93.0
	Divorced/separated	4	4.0	4.0	97.0
	Domestic partnership	2	2.0	2.0	99.0
	Rather not say	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

6. Please indicate the highest level of education completed:

Highest level of education completed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school grad	3	3.0	3.0	3.0
	Some college	19	19.0	19.0	22.0
	Bachelor's degree	30	30.0	30.0	52.0
	Master's/PhD degree	47	47.0	47.0	99.0
	Rather not say	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

7. Which of the following best describes the area you live in?

Type of Residential area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	70	70.0	70.0	70.0
	Suburban	26	26.0	26.0	96.0
	Rural	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

8. How long have you been using the Internet for?

Internet use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 6 months	1	1.0	1.0	1.0
	6 months to 1 year	2	2.0	2.0	3.0
	1 to 3 years	28	28.0	28.0	31.0
	3 to 5 years	33	33.0	33.0	64.0
	More than 5 years	36	36.0	36.0	100.0
	Total	100	100.0	100.0	

9. How long have you been shopping online for?

Online shopping use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 6 months	6	6.0	6.0	6.0
	6 months to 1 year	15	15.0	15.0	21.0
	1 to 3 years	55	55.0	55.0	76.0
	3 to 5 years	20	20.0	20.0	96.0
	More than 5 years	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

10. On average, how much money do you spend on online shopping in a month?

Money spent shopping online monthly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< $50	59	59.0	59.0	59.0
	$50 - $100	32	32.0	32.0	91.0
	$100 - $300	6	6.0	6.0	97.0
	$300 - $500	2	2.0	2.0	99.0
	> $500	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

11. What products and services have you purchased over the Internet? Please check all that apply.

Product/service categories purchased

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 2 categories	42	42.0	42.0	42.0
	3 - 4 categories	53	53.0	53.0	95.0
	5 categories or >	5	5.0	5.0	100.0
	Total	100	100.0	100.0	

12. In your experience of shopping online, which of the following Internet technologies have you used?

Level of relevant knowledge utilised

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	57	57.0	57.0	57.0
	Medium	22	22.0	22.0	79.0
	High	21	21.0	21.0	100.0
	Total	100	100.0	100.0	

Correlations

		Multi-tasking offline	Multi-tasking online	Hierarchical-sequential action	Interactive actions	Propensity towards casual scanning	Propensity towards concentrating	Knowledge level	Action orientation	Price consciousness	Flow	Fixed goal
Multi-tasking offline	Pearson Correlation	1	.420**	-.037	.327**	.072	.009	.068	-.245*	.021	.136	-.137
	Sig. (2-tailed)	.	.000	.716	.001	.475	.929	.500	.014	.839	.179	.173
	N	100	100	100	100	100	100	100	100	100	100	100
Multi-tasking online	Pearson Correlation	.420**	1	-.012	.113	.120	.029	.181	-.174	.163	.175	-.147
	Sig. (2-tailed)	.000	.	.907	.262	.233	.771	.072	.084	.106	.082	.143
	N	100	100	100	100	100	100	100	100	100	100	100
Hierarchical-sequential action	Pearson Correlation	-.037	-.012	1	.212*	-.158	.106	-.086	.159	.177	-.190	.342**
	Sig. (2-tailed)	.716	.907	.	.035	.117	.295	.395	.114	.079	.059	.000
	N	100	100	100	100	100	100	100	100	100	100	100
Interactive actions	Pearson Correlation	.327**	.113	.212*	1	-.138	.083	.111	-.031	.049	-.145	.053
	Sig. (2-tailed)	.001	.262	.035	.	.171	.412	.272	.758	.627	.151	.598
	N	100	100	100	100	100	100	100	100	100	100	100
Propensity towards casual scanning	Pearson Correlation	.072	.120	-.158	-.138	1	-.024	.016	-.330**	.028	.353**	-.185
	Sig. (2-tailed)	.475	.233	.117	.171	.	.812	.876	.001	.784	.000	.065
	N	100	100	100	100	100	100	100	100	100	100	100
Propensity towards concentrating	Pearson Correlation	.009	.029	.106	.083	-.024	1	.216*	-.120	.235*	.004	.010
	Sig. (2-tailed)	.929	.771	.295	.412	.812	.	.031	.233	.019	.967	.921
	N	100	100	100	100	100	100	100	100	100	100	100
Knowledge level	Pearson Correlation	.068	.181	-.086	.111	.016	.216*	1	-.207*	.151	.215*	-.037
	Sig. (2-tailed)	.500	.072	.395	.272	.876	.031	.	.039	.134	.032	.712
	N	100	100	100	100	100	100	100	100	100	100	100
Action orientation	Pearson Correlation	-.245*	-.174	.159	-.031	-.330**	-.120	-.207*	1	-.089	-.636**	.394**
	Sig. (2-tailed)	.014	.084	.114	.758	.001	.233	.039	.	.379	.000	.000
	N	100	100	100	100	100	100	100	100	100	100	100
Price consciousness	Pearson Correlation	.021	.163	.177	.049	.028	.235*	.151	-.089	1	.009	.098
	Sig. (2-tailed)	.839	.106	.079	.627	.784	.019	.134	.379	.	.928	.333
	N	100	100	100	100	100	100	100	100	100	100	100
Flow	Pearson Correlation	.136	.175	-.190	-.145	.353**	.004	.215*	-.636**	.009	1	-.598**
	Sig. (2-tailed)	.179	.082	.059	.151	.000	.967	.032	.000	.928	.	.000
	N	100	100	100	100	100	100	100	100	100	100	100
Fixed goal	Pearson Correlation	-.137	-.147	.342**	.053	-.185	.010	-.037	.394**	.098	-.598**	1
	Sig. (2-tailed)	.173	.143	.000	.598	.065	.921	.712	.000	.333	.000	.
	N	100	100	100	100	100	100	100	100	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix 5: Dendrogram